SECTION II
ALTERNATIVES

2.1 DEVELOPMENT AND SCREENING OF ALTERNATIVES

2.1.1 General

A range of alternatives was developed for this STH 26 project corridor. Each of these alternatives was evaluated for its ability to meet the purpose and need requirements of this project. In accordance with the Council on Environmental Quality (CEQ) guidelines only those feasible and prudent alternatives that passed the screening process were selected for detailed evaluation in this Draft EIS. Those alternatives that did not meet the purpose and need requirements of this project are also described in this section.

Although the proposed solutions address the entire project corridor, alternatives were developed for each of the corridor's three study segments: the south segment (Janesville to Fort Atkinson), the central segment (Fort Atkinson to Johnson Creek), and the north segment (Johnson Creek to Watertown).

Section 2.1 focuses on the process used to develop and screen alternatives. It discusses the scoping and screening processes, stages in the alternative development process, and environmental and other geographical features that influence decision making within each segment of the project study area.

The study process consisted of a preliminary alternative development stage and a detailed study stage. The preliminary stage identified a broad range of alternatives and identified those that met the purpose and need requirements for this project and merited further study. The detailed study stage was a thorough evaluation of those alternatives. Table 2.1.4 shows the improvement alternatives that were developed and, if applicable, the stage in the screening process at which a particular alternative was dismissed from further consideration.

Section 2.2 focuses on the range of alternatives considered, and Section 2.3 focuses on the alternatives retained for detailed study. The impacts of each alternative are presented and compared, consistent with the level of detail used for the analysis at each stage of the development process.

2.1.2 Scoping Process

2.1.2.1 Agency Coordination

Preliminary alternatives were developed based on concerns identified during the scoping process, involving early coordination with federal and state agencies and Native American tribes. Agencies expressing an interest or concerns with the project included: U.S. Department of Interior (DOI) Fish and Wildlife Service (FWS); DOI National Park Service (NPS); U.S. Environmental Protection Agency (EPA); U.S. Corps of Engineers (COE); Wisconsin Department of Natural Resources (WDNR); Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP); State Historical Society of Wisconsin (SHSW). Native American Tribes expressing an interest or concerns with the project include Ho-Chunk Nation, Menominee Indian Tribe of Wisconsin, Forest County Potawatomi Community, and Oneida Tribe of Indians.

Principal agency or Native American concerns identified to date (not necessarily in order of priority) are as follows:

- Avoid the Storrs Lake Wildlife Area east of Milton.

- Wetland impacts must be minimized and unavoidable impacts mitigated. In particular, avoid fragmenting the large wetland area east of Jefferson.

- The federally listed threatened Prairie White-Fringed Orchid occurs in the project study area, generally within the watershed of Otter Creek. Minimizing impacts to potential habitat of this plant is important.

- State-listed threatened or endangered species may be present in the study area and need to be investigated.

- Avoid impact to the Milton House, a National Historic Landmark. Avoid and/or minimize impacts to area historic architectural sites.

- Minimize impacts to Native American cultural resources (archaeological sites) and avoid impacts to significant sites. The area between the Crawfish and Rock Rivers west of Jefferson was identified by SHSW as an area of concern.

- Development of the Ice Age National Scenic Trail, a component of the National Trails System, is intended for the area between Janesville and Milton. A trail crossing of STH 26 at Milton needs to be accommodated.

- The Glacial Drumlin State Trail includes a segment of abandoned railroad right-of-way that received Land and Water Conservation Fund (LWCF) funds.

- Agricultural impacts should be minimized. An Agricultural Impact Statement (AIS) must be prepared for the project when a preferred route is identified.

- The COE wishes to participate as a cooperating agency on the EIS.

2.1.2.2 Public Involvement

The overall STH 26 corridor project is divided into three study segments to facilitate development of alternatives and address local concerns and interests. The three study segments are shown in Section I on Figures 1.2.2.1, 1.2.2.2, and 1.2.2.3 and are as follows:

South Segment - Janesville to Fort Atkinson (IH 90 to Fort Atkinson Bypass)
Central Segment - Fort Atkinson to Johnson Creek (Fort Atkinson Bypass to Baneck Lane)
North Segment - Johnson Creek to Watertown (Baneck Lane to STH 60-East)

Public involvement has been on-going in the form of meetings, telephone conversations, and written comments. In June 1999, Public Information Meetings were held in Milton, Jefferson, and Watertown. The range of preliminary alternatives was shown and described to the public during these meetings. In addition, numerous meetings have been held with officials from individual towns and cities in the study area, and a briefing was provided to the Jefferson County Board. Based on input received at these meetings refinements were made to the preliminary alternatives.

Each of the three study area segments has a Study Committee composed of members nominated by communities likely to be impacted by corridor alternatives to represent their community. Each committee contains a mix of elected officials, technical staff, and other representatives. Meetings with each of the Study Committees were informal working sessions set up to encourage local input and assist data gathering for this study. The Study Committees were not official voting forums, and they did not replace any official action taken by a municipality. Regular public involvement meetings, including public information meetings, were held in addition to the Study Committee meetings.

Discussion issues at the Study Committee meetings included project purpose and need, existing and forecasted traffic volumes, potential solutions including through town alternatives, typical roadway sections, land use, access points, findings from written comments received at the public information meetings, historic preservation, long term corridor preservation, and the project enumeration process of the Transportation Projects Commission (TPC). Seven Study Committee meetings in each segment were held in 1999 and 2000 in addition to two corridor-wide local officials meetings.

Many of the preliminary alternatives were either modified or dismissed based on discussions with the study committees, impacts associated with the alternatives, inability to meet the purpose and need requirements of this project, and/or comments received from the June 1999 public information meetings. The resulting alternatives were shown at a second series of public information meetings held in Milton, Jefferson, and Watertown in January 2000, and were discussed with the study committees. The detailed study alternatives were selected after these meetings.

2.1.3 Screening Process and Methodology

2.1.3.1 Screening Process

The purpose of the project is to provide a safe and efficient transportation corridor having national, state, regional and local importance for STH 26 while minimizing adverse environmental disturbances. The screening process involved consideration of whether a specific alternative would meet the identified purpose and need requirements for this project. The primary requirements are that the alternative must:

- Provide a transportation system consistent with state planning efforts and the intended highway function as a route of national, state, regional and local importance.
- Provide capacity and an adequate level of service for current and projected traffic volumes including trucks.
- Reduce congestion and travel time.
- Improve the safety of the highway by reducing traffic conflicts and the potential for crashes.

The alternative must also:

- Provide relatively unimpeded traffic flow with an operating speed of 55-65 mph (89-105 km/h) in rural areas, and a substantial reduction in the number of existing access points in urban areas to maintain a minimum operating speed of 40 mph (65 km/h).
- Avoid or minimize adverse environmental disturbances, including impacts to wetlands and other natural resources, and cultural resources such as historical and archaeological features.

- Minimize impacts due to right-of-way acquisition and relocation.

- Support local community needs and interests, and be consistent with local development patterns.

Only the alternatives that met the purpose and need requirements of this project and minimized the associated impacts were selected for detailed evaluation in this EIS. All alternatives consist of four-lane divided rural roadways. Freeway access control standards (access allowed only at interchanges) would be implemented along the bypass portions of the route. It is further proposed for the rural portions of STH 26 between the bypasses that expressway access standards be applied. This would mean that public road at-grade intersections and private driveways would be allowed at safe locations that meet spacing guidelines. It would be the goal of WisDOT to minimize the number of at-grade public intersections and private driveways. This would be accomplished by consolidation, grade separation of certain public roads from STH 26, or constructing an interchange at selected busy intersections. Once a preferred alternative is selected, and before final roadway design is undertaken, WisDOT proposes to work with local units of government and adjacent property owners to determine what access modifications would need to be made.

The No-Build Alternative is also evaluated in detail, as required by 40 CFR 1502.14 of the CEQ regulations, because it serves as a baseline to evaluate the improvement alternatives. The improvement alternatives selected for detailed evaluation consist of eight alternatives, two in the south segment, four in the central segment, and two in the north segment. These detailed study alternatives are further described in Section 2.3.

2.1.3.2 Methodology

In the preliminary stage, an aerial photo base map showing environmental and other geographic features of concern was developed for each of the three study segments. Mapped information included wetlands; 100-year floodplain boundaries; rivers, streams, and lakes; property lines; corporate boundaries; roadway names and boundaries; parks, cemeteries, and woodlands; and churches, schools, airports, mobile home parks, and industrial land. Additional major constraints were mapped as they were identified.

Land area impacts (farmland, wetland, etc.) were calculated based on a constant 400-foot (122 m) wide corridor during the preliminary alternative development stage. For the detailed study stage, area calculations were based on a constant 400-foot (122 m) wide corridor in bypass areas, and approximate right-of-way lines reflected by roadway slope intercepts obtained from computer modeling along the existing corridor.

Land areas were classified based on interpretation of the aerial maps. Efforts were made to obtain additional information directly from impacted property owners or farm operators.

Wetlands were delineated based on WDNR wetland inventory maps, SCS maps, and field review and verification. Floodplains were located using Flood Insurance Rate Maps (FIRM) from existing flood insurance studies.

An assessment of floodplain impacts west of Jefferson was made using the HEC-RAS hydraulic analysis program. Cross sections for the HEC-RAS analysis were taken from a two-foot (0.6 m) contour map to closely approximate the floodplain geometry.

An archive and literature search, and a Comprehensive Historic Survey were completed to identify architectural sites potentially eligible for the National Register. A Determination of Eligibility (DOE) was completed on rural architectural sites to determine actual eligibility.

An archive and literature search was completed during the preliminary alternative development stage to identify known archaeological sites in the study area. Following this record search, a Phase I multiple corridor survey methodology was undertaken, designed to sample areas of high archaeology site probability to ascertain the presence or absence of significant archaeological sites. A complete Phase I archaeological investigation will be conducted on the selected preferred alternative to identify potential archaeological sites requiring further testing. A Phase II investigation of the identified archaeological sites will be completed prior to the Final Environmental Impact Statement.

A Phase I hazardous material investigation was conducted to identify potential contaminated sites in the study area.

A qualitative analysis was prepared to evaluate land use and socioeconomic issues. An expert panel of individuals with particular land use knowledge in the study area was used in the detail study stage to further identify concerns and evaluate secondary impacts.

Cost was estimated on a per mile basis that depended upon the types and lengths of roadway sections within a particular alternative. A unit cost per interchange, and a lump sum cost for structures over side roads, railroads, streams, or rivers was also added to the initial construction cost estimate. A 15 percent engineering and contingency cost was added to the construction cost subtotal.

Public comment was solicited at public meetings as well as smaller meetings with study committees, property owners, and public officials. Notices were sent to potentially affected property owners informing them of upcoming public information meetings. Notices of public information meetings were placed in area newspapers and sent to area radio stations. A newsletter describing the alternatives and encouraging public comment was mailed to approximately 2000 residents in the project area.

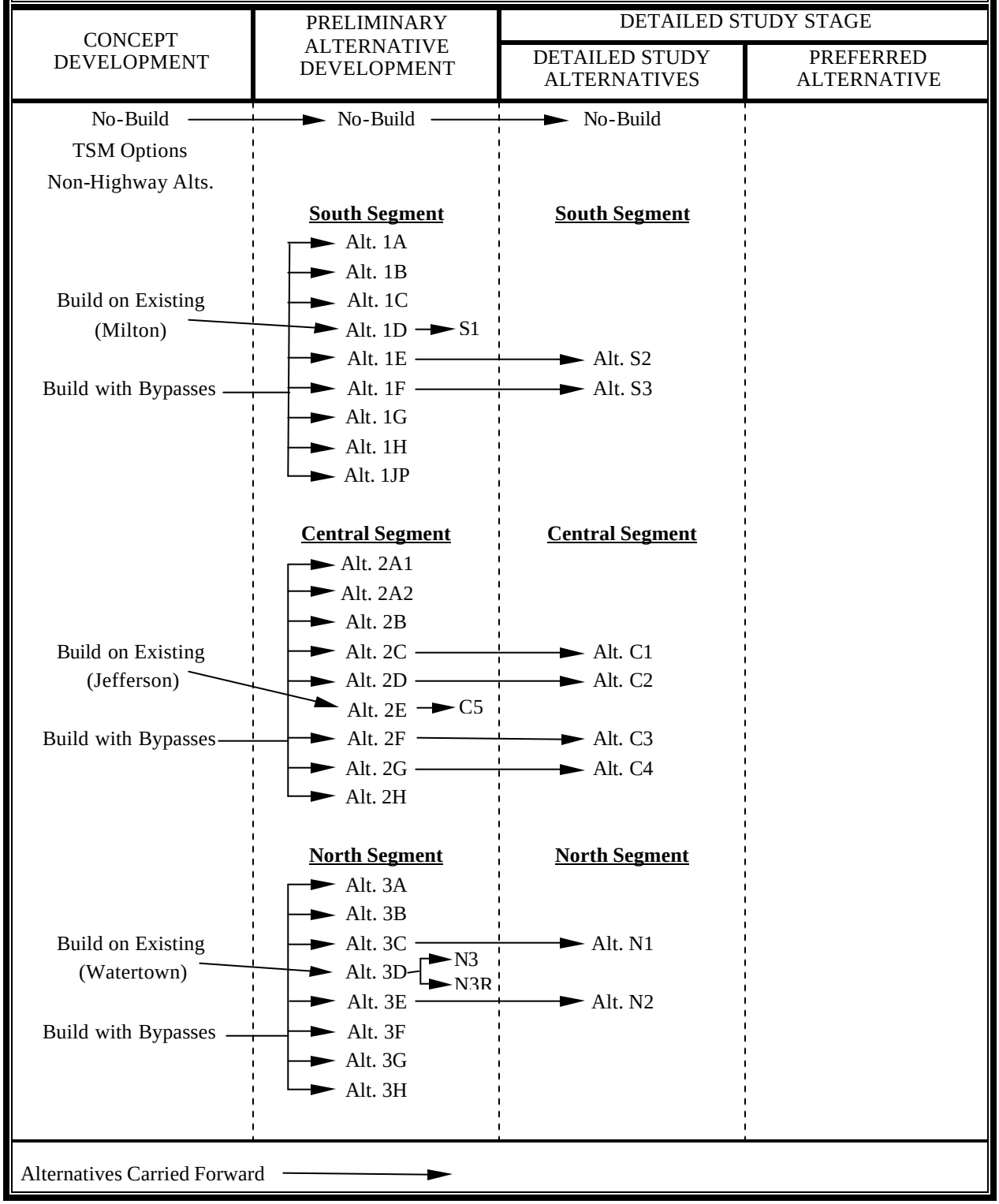
Field reconnaissance was conducted to permit interested regulatory agencies to review the corridor and to view potentially impacted environmentally sensitive areas. Participants included representatives of FHWA, USEPA, US Army COE, WDNR, and State Historical Society of Wisconsin.

2.1.4 Stages of Development

The process that will lead to the selection of a Preferred Alternative has been divided into two distinct stages: preliminary alternative development and detailed study stage. A schematic overview of the process is shown in Table 2.1.4. The purpose of the preliminary stage was to identify a broad range of alternatives, and to study those preliminary alternatives in sufficient detail to identify those reasonable alternatives meeting the purpose and need requirements for the project while minimizing environmental disturbances that merited detailed study in the next stage. The goal of the detailed study stage was to provide a more thorough evaluation of a range of those alternatives, thus providing the basis for selection of a Preferred Alternative.

TABLE 2.1.4

ALTERNATIVE DEVELOPMENT PROCESS SCHEMATIC



2.1.4.1 Preliminary Alternative Development Stage

For alternative development and evaluation, the project was divided into three study segments (south, central, and north) as described and shown in Section I. Alternatives were modified and refined during the preliminary stage. Some preliminary alternatives were dismissed entirely as not meeting the purpose and need requirements of this project or because other prudent and feasible alternatives with less significant adverse environmental disturbances existed. In some cases new alternatives were identified during the course of preliminary screening and evaluation.

Comments on the preliminary alternatives were actively solicited from public officials and the general public. Preliminary alternatives were presented at Study Committee meetings that included representatives of Rock, Jefferson, and Dodge Counties; the Cities of Janesville, Milton, Fort Atkinson, Jefferson, and Watertown; the Village of Johnson Creek; and the Townships of Harmony, Milton, Koshkonong, Jefferson, Aztalan, Farmington, Watertown, Milford, Shields, Emmet, and Clyman. The same preliminary alternatives were presented at public information meetings held during June 1999 in Milton, Jefferson, and Watertown. Refined preliminary alternatives, including several through-town alternatives, were studied for a longer period of time and were presented to the public at the January 2000 public information meeting.

In addition to public comment, the preliminary alternative development stage included engineering analysis, environmental investigation, and agency coordination. Information from all four of these sources was used in determining which preliminary alternatives merited being carried forward, modified, or dismissed. Preliminary alternatives, including those dismissed, are discussed in Section 2.2.

2.1.4.2 Detailed Study Stage

Following the preliminary alternative development stage and public comment, eight improvement alternatives plus a No Build alternative were carried forward for detailed study. The eight improvement alternatives address the purpose and needs of the entire project corridor, and will be discussed in terms of the corridor's three study sections. In the south segment, two improvement alternatives were carried forward for detailed study. The two alternatives are the same in their alignment location except near the City of Milton where two east side options exist. North and south of Milton both alternatives generally follow the existing STH 26 roadway. In the central segment, four improvement alternatives were carried forward for detailed study. The alternatives are the same in their alignment location except near the City of Jefferson where four bypass options exist, including two west and two east locations. North and south of Jefferson the four alternatives generally follow the existing STH 26 roadway. In the north segment, two improvement alternatives were carried forward for detailed study. The alternatives are the same in their alignment location except near the City of Watertown where two bypass options exist, including one near west and one near east location. North and south of the Watertown both alternatives generally follow the existing STH 26 roadway.

Two sections within the 48-mile (77-km) corridor were found to be sufficient for the projected traffic volumes and therefore were not anticipated to require additional capacity improvements under this study. However, both of these sections will be further studied for possible intersection and access improvements that could improve safety and mobility. The first section is in the south segment between Janesville and Milton from CTH Y to just south of STH 59-East. This section was improved in 1999 as a four-lane divided highway with access management. The second section is in the central segment at the Village of Johnson Creek from CTH Y to Baneck Lane. This section is programmed to be improved in 2001-2002 as a four-lane divided highway with access management.

Detailed study alternatives were evaluated applying the same criteria used in the preliminary stage. However, many of the factors were evaluated in greater depth or with additional available information. Engineering analysis was performed for the alternatives to define approximate right-of-way requirements as the basis for calculating land impacts. Impacts were evaluated for the No-Build Alternative, which serves as a baseline for comparison of build alternatives. Detailed study alternatives are discussed in Section 2.2.

2.1.5 Description of Environmental and Geographical Features

This section describes the existing environmental and geographic features that influenced decision making in each study segment.

2.1.5.1 South Segment

The existing roadway between the City of Janesville and the City of Milton lies adjacent to land that is a mixture of commercial and residential development and farmland. Land between these two communities is planned for future development growth. Within the City of Milton major features along STH 26 include numerous residential and commercial properties, ten side road intersections, and 54 driveway access points. Also, several historic structures are within Milton adjacent to the STH 26 corridor including the Milton House (shown here), a National Historic Landmark (NHL), three historic buildings listed on the National Register of Historic Places (NRHP), and five additional historic structures eligible to be on the NRHP (see Figure 2.2.2.4). In addition, South Goodrich Park, North Goodrich Park, East Elementary School, Milton East Cemetery, and residential and commercial properties are adjacent to the existing roadway. The Wisconsin and Southern Railroad tracks cross existing STH 26 at grade just south of the Milton House. North of Milton, existing STH 26 crosses Otter Creek at the intersection with CTH N. North of Otter Creek, wetlands are located east of the roadway, and an abandoned railroad corridor converted to a recreation trail is located along the west side of the highway.

Milton House

Major features west of STH 26 include Mud Lake, Clear Lake and Grass Lake and their associated wetland complexes northwest of Milton, Forest Lake Park in the northwest corner of Milton, Lake Koshkonong, and numerous rural residential subdivision developments. A population of the prairie white-fringed orchid, a federally listed threatened species, has been identified near Lake Koshkonong within the Otter Creek watershed.

Major features east of STH 26 include Bowers Lake, Storrs Lake, and the Storrs Lake Wildlife Area, the City of Milton Industrial Park, rural residential subdivisions, and two golf courses. Wetlands and a branch of Otter Creek are located east of the Storrs Lake Wildlife Area.

2.1.5.2 Central Segment

The existing STH 26 corridor follows the Fort Atkinson Bypass west of the city and leaves the Fort Atkinson area traveling adjacent to relatively flat farmland before entering the City of Jefferson. A Union Pacific Railroad corridor parallels the western side of the highway. The Fort Atkinson Airport, a small regional airport, is located between the cities of Fort Atkinson and Jefferson along the eastern edge of STH 26. Through the City of Jefferson and along existing STH 26 major features include numerous industrial, commercial, and residential properties, 33 side road intersections, and 65 driveway access points. Also within Jefferson is the Main Street Commercial Historic District (shown below and on Figure 2.2.3.6). This NRHP district encompasses over 40 structures on 12 blocks in Jefferson's traditional downtown. Twenty-five of the contributing buildings are located adjacent to existing STH 26.

Jefferson's Main Street Commercial Historic District

Eight other potentially eligible historic structures, in addition to the Main Street Commercial Historic District, are adjacent to existing STH 26 in Jefferson. Between Jefferson and Johnson Creek the existing corridor travels through relatively flat terrain with some farmland and rural residential development adjacent to the roadway. Major features along this segment of the highway include the Glacial Drumlin State Trail, small wetlands and woodlots, and Bicentennial County Park located east of the roadway about one-mile (1.6-km) south of CTH Y.

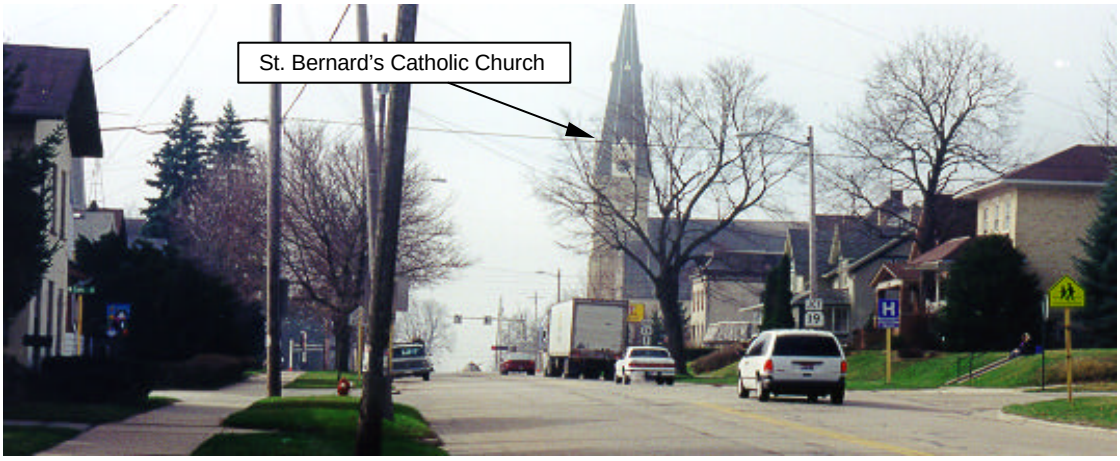
Major features west of STH 26 include farmland, the Crawfish and Rock Rivers, and scattered wetlands. Numerous archaeological sites are within the area between the rivers, and a floodplain surrounds the Crawfish River near Jefferson.

Major features east of STH 26 include the Rock River, St. Coletta School, farms and residential properties, and numerous archaeological sites. Wetlands and woodlots are located throughout the eastern edge of Jefferson as are various residential and farmland properties. A large wetland area is located east of CTH Y. Between the city corporate limits and this wetland is the St. Coletta of Wisconsin property, an adult service agency that provides for the needs (schooling, medical care, training, work, etc.) of adult developmentally disabled individuals. Input from the St. Coletta community indicates a need for a sidewalk along the south side of USH 18 for pedestrian usage between the main school facility on CTH Y and their group homes within the city of Jefferson. The original school site on the corner of USH 18 and CTH Y is listed on the NRHP as the St. Coletta School Historic District. St. Coletta also owns and

operates an adult nursing home complex known as Alverno Cottages along CTH Y just north of USH 18. The Alverno Cottages are also eligible for the NRHP. Northeast of Jefferson is the Ladish Malt Company, a large industrial complex where malt is manufactured for beer. The buildings are surrounded by support facilities including a railroad spur and sewage lagoons. Several farms are located east of Jefferson.

2.1.5.3 North Segment

The existing STH 26 corridor travels along land from Johnson Creek to Watertown that has a mix of farmland, residential, and commercial properties located adjacent to STH 26. The Watertown airport is located south of the city and just east of STH 26, and has access off STH 26. In Watertown, STH 26 crosses over the Rock River and passes under a Canadian Pacific Railway bridge. Through the City of Watertown, major features include numerous residential, commercial, and historic properties adjacent to the roadway, 26 side road intersections, and 109 driveway access points. Two separate historic districts are located north and south of STH 19 adjacent to STH 26. These historic sites are identified as the North Washington Historic District with 35 buildings along existing STH 26 (see photo below and Figure 2.2.4.4), and the South Washington Historic District with 14 buildings adjacent to existing STH 26. In addition to these two historic districts, four other historic sites, including the St. Bernard Catholic Church



Watertown's North Washington Historic District

complex, are adjacent to existing STH 26. Three other historic sites, including a Chicago & Northwestern Railroad depot, Maranatha Baptist Bible Church, and an industrial building, are located adjacent to the Union Pacific rail corridor west of existing STH 26 (see Figure 2.2.4.5). St. Henry Cemetery is located just east of STH 26 in the northern part of town near the entrance to the Watertown High School. An interchange with STH 16 is located just north of the city. This interchange would require reconstruction with any alternative proposed.

North of the STH 16 interchange are numerous side road intersections with local and CTH roads. Major features include adjacent farmland and rural residential properties. Slight's Standard Filling Station, a historic gas station eligible for the NRHP, is located on the west side of STH 26 at Kiln Road just north of Watertown. The existing highway travels within the hill area of the local drumlin terrain and all of the alternatives would impact adjacent property due to roadway slopes required in this area. STH 16 separates from STH 26 at the STH 60-West interchange approximately eight miles (12.9 km) north of Watertown; the existing roadway then travels under a narrow railroad bridge before continuing on to

STH 60-East and points beyond. The interchange at STH 60-West may need reconfiguring with any alternative and the railroad bridge will require reconstruction with all alternatives.

Major features west of STH 26 include farmland, the Rock River, and some scattered woodlots and wetlands. Bridges over three railroad crossings and grade separations of local roads would be required. A large dairy farm operation exists just west of the city limit edge of Watertown.

Major features east of STH 26 include farmland, the Rock River, and an electrical substation located in the southeastern part of Watertown. Along the eastern side of Watertown is the existing STH 16 bypass. An interchange would be required with STH 16 to maintain access to the local hospital east of Watertown. Due to the location of the Rock River with STH 16, any interchange may require realignment of STH 16 at that point. An east side corridor also requires bridges over two railroad crossings as well as a bridge over Silver Spring Creek. East of Watertown there are wetland and woodlot habitats within the drumlin areas. Because of the drumlins, roadway earthwork requirements would impact adjacent farmland and residential properties.

2.2 ALTERNATIVES CONSIDERED

2.2.1 Range of Alternatives Considered

Project development included consideration of the following improvement concepts:

2.2.1.1 No-Build Alternative

Under the No-Build Alternative, improvements to the STH 26 corridor would primarily consist of maintenance activities or spot improvements that attempt to maintain current service levels. Generally, the rural section of roadways, including the Ft. Atkinson bypass, would remain a two-lane rural roadway with no change in access. The exception to this is the rural section between Janesville and Milton, which was reconstructed as a four-lane divided rural highway in 1999. Urban sections of roadway in Milton, Jefferson, and Watertown (north of STH 19) would remain as two-lane urban roadways with some parking and turn lanes. The urban section of Johnson Creek between CTH Y and Baneck Lane is programmed for reconstruction as a four-lane divided roadway in 2001-2002, and the urban section of Watertown south of STH 19 is programmed for reconstruction as a four-lane urban roadway in 2002. There would be minimal change in access in any of the urban communities.

Under this alternative, the existing roadways in the urban communities would become more congested than today. This congestion would cause hardship to local mobility, limiting the public's access to businesses, schools, and other parts of the community. Because STH 26 is the major north-south route in Jefferson and Watertown, police, fire, ambulance and school bus service, increased congestion in these areas would hinder these services. As development occurs in and around the corridor, an unimproved two-lane roadway in Milton and Jefferson and the proposed 4-lane plan in Watertown would not be able to accommodate growing traffic. STH 26 would not function effectively as a regional highway, and regional traffic would increasingly use less congested local and county roads. The utility of STH 26 for transporting goods to regional, statewide, and national destinations would decline. The No-Build Alternative, while having fewer environmental impacts such as land acquisition and relocations, would not be consistent with the *Corridors 2020* plan and its intended highway function as a route of national, state, regional and local importance.

In summary, the No-Build Alternative would not meet the purpose and need requirements of this project. It is carried forward as a detailed study alternative to serve as a baseline for comparison of Build Alternatives and for evaluation of their environmental impacts.

2.2.1.2 Traffic System Management

Traffic system management measures are generally applicable only in larger urban areas where traffic signal timing, designated use lanes, and other measures can have a substantial effect. Such measures are not reasonable for this project with smaller communities separated by rural areas, and do not address the purpose and need requirements for the project. For this reason, this alternative was dismissed from further consideration.

2.2.1.3 Non-Highway Alternatives

Mass Transit

Mass transit alternatives in the form of bus, light rail, and commuter rail were considered early in the project. City mass transit services are provided in the City of Janesville and in the City of Watertown. The Janesville Transit System operates six fixed routes within the city. The Watertown Transit System operates a shared ride taxi service with a fleet of seven vehicles within the city.

While Janesville has a population of 59,626, Milton's population is 5090, Ft. Atkinson's population is 11,342, Jefferson's population is 6,740, Johnson Creek's population is 1,612, and Watertown's population is 21,151 (Wisconsin DOA, 1999 estimate).

Mass transit is typically considered to be an effective transportation solution in larger urbanized areas with a population of more than 200,000 (FHWA Technical Advisory T 6640.8A). Light rail and commuter rail transit service generally involves from 2,000 to 20,000 passengers per hour. The density and size of the population in the communities served along the 48-mile (77-km) STH 26 corridor, and the rural agricultural nature of the surrounding area, make bus or commuter rail service infeasible. Such alternatives would not meet the purpose and need requirements for this project and therefore were dismissed from further consideration.

Passenger Rail and Inter City Bus

Passenger heavy rail service involves trains at travel speeds similar to Amtrak with limited stops. Rail passenger service between Janesville and Chicago was started in April 2000. The Lake County Limited leaves Janesville at 6:00 am daily and makes a return trip leaving Chicago at 8:15 pm. In addition to passengers, mail and express freight can be accommodated. Amtrak is responsible for the service, and the trains run on tracks owned by the Wisconsin and Southern Railroad Company. Amtrak passenger service also passes through Watertown on the Canadian Pacific Railway but does not stop.

Wisconsin, along with a consortium of other Midwest states and the federal government is planning a network of high-speed passenger rail lines extending from a Chicago hub. Potential station sites include Milwaukee, Watertown and Madison. If implemented, the earliest service could be provided would be 2003.

Inter city bus service on STH 26 is currently limited to charters. Badger Coaches, Inc. (also known as Badger Bus) provides eight daily buses per direction between Madison and Milwaukee on IH 94. Van

Galder Bus Company operates 19 daily buses in each direction on IH 90 between Madison and O'Hare Airport in Chicago, each with a schedule stop in Janesville. Van Galder Bus Company also operates 4 daily bus trips between Madison and downtown Chicago, each with a scheduled stop in Janesville. Greyhound provides 5 daily bus runs on IH 90 between Madison and Rockford, Illinois, with three of them stopping in Janesville. Greyhound also operates 5 daily buses on IH 94 between Madison and Milwaukee, with two of them being non-stop service.

Passenger rail and inter city bus are not practical for serving existing and future traffic demand within the STH 26 corridor due to the density and size of the population in the communities served along the 48-mile (77 km) route, and rural agricultural nature of the surrounding area. Such alternatives would not meet the purpose and need requirements for this project and therefore were dismissed from further consideration.

STH 26 does function, however, as the major connector to these services for Milton, Ft. Atkinson, Jefferson, Johnson Creek, and Watertown. A park-and-ride lot is being incorporated into the improvement plans for STH 26 and IH 94 at Johnson Creek, with provisions being made to accommodate inter city bus service. Construction on this project is scheduled for 2001-2002. Planning for additional park-and-ride facilities in the Janesville area is also being considered.

Freight Rail

Development of a corridor to handle freight rail was considered early in the project. Freight rail service currently exists between Clyman Junction and Jefferson as part of the Union Pacific Railroad rail network in Wisconsin. The rail line from Fort Atkinson to Janesville was abandoned in 1975, and a good portion of the corridor south of Jefferson has been developed into a recreational trail. The rail line from Fond du Lac to Clyman Junction has also been abandoned and now serves as a trail. There are no federal or state programs to finance the construction of new freight rail lines, and it is unlikely that the Union Pacific Railroad would ever extend their branch line from Janesville to Jefferson using their own capital resources since they abandoned this link in 1975.

WisDOT's Translinks 21, a multimodal transportation plan for Wisconsin's 21st century, identifies the need for improving existing rail track infrastructure to improve service levels, increase operating speeds, and enhance rail/highway safety. Multiple rail track corridors exist between the industrial Fox River Valley area, through the Milwaukee area, and into the Chicago area where numerous service connections can be made with major east-west nationwide rail lines. It is unlikely that a new rail line along STH 26 could duplicate the numerous service line connections to the east-west rail lines that currently exist, and thus the service would not be competitive with the existing services. The existing rail lines from the Fox River Valley area to the Milwaukee and Chicago areas, the traditional destination for Wisconsin rail freight to national communities, can handle additional rail freight capacity. This alternative was therefore dismissed from further consideration. The STH 26 corridor serves the needs of truck freight which typically has more dispersed destinations than rail freight.

2.2.1.4 Preliminary Alternatives

Preliminary alternatives were developed in an attempt to meet the purpose and need requirements for this project, i.e., to establish an effective regional transportation corridor meeting current WisDOT design standards as discussed in section 2.1.3.1. WisDOT's facilities development guidelines indicate that capacity improvement for a two-lane rural arterial roadway should be considered when the ADT reaches 8,200 vehicles. Currently, 90 percent of the rural segments within the 48-mile (77-km) study corridor

have traffic volumes exceeding 8,200 ADT. By 2028, almost all rural segments are projected to exceed the 8,200 ADT threshold by two to four times.

In rural areas, each of the preliminary alternatives consists of providing a four-lane divided rural roadway. Several alternative bypasses for Milton, Jefferson, and Watertown were considered as well as through town urban alternatives. Freeway access control standards (access allowed only at interchanges) would be implemented along the bypass portions of the route. Expressway access standards, permitting public road at-grade intersections and private driveways at safe locations that meet spacing guidelines, would be applied to the rural portions of STH 26 between communities. Urban arterial design standards would be considered along urban sections of STH 26 in an attempt to avoid the severe impacts that would result from the construction of a freeway or expressway.

WisDOT's facilities development guidelines indicate that a two-lane urban roadway falls below LOS "C" at 13,000 ADT on facilities with 11-foot (3.3 m) wide driving lanes and 5 percent trucks. Milton currently has traffic volumes ranging from 9,700 to 13,800 ADT with about 15 percent trucks. These volumes are estimated to be in the range of 18,500 to 25,000 by 2028. Jefferson currently has traffic volumes ranging from 14,700 to 20,400 ADT with about 14 percent trucks. These volumes are estimated to be in the range of 28,000 to 38,000 ADT by 2028. Watertown currently has traffic volumes ranging from 13,900 to 19,600 ADT with about 15 percent trucks. These volumes are estimated to be in the range of 26,000 to 37,000 by 2028.

Table 2.2.1.4 shows the design standards required to meet this demand in the design year 2028 according to the FDM. If the urban communities are not bypassed, this entails improving the urban segments with a four-lane or six-lane divided cross-section and limiting the amount of access.

TABLE 2.2.1.4
DESIGN CRITERIA FOR URBAN STREETS
FUNCTIONALLY CLASSIFIED AS ARTERIALS

Traffic Volume (1)		Roadway			
Design Class	**Design ADT**	**Design Speed**	**No. of Lanes**	**Lane Width**	**Median**
4	17,000 – 25,000	40-45 mph (65-73 km/h)	4	12 ft. (3.6 m)	Yes
5	25,000 – 35,000	45-50 mph (73-80 km/h)	6	12 ft. (3.6 m)	Yes

Source: WisDOT Facilities Development Manual, Chapter 11

(1) Ranges of traffic volumes were determined from Northwestern University's Intersection Capacity Chart #4 for level of service "C" and assuming: no parking, negligible buses, 10% right turns, 10% left turns, 5% trucks, adjustment for metropolitan area size and peak hour factor = 0.92, K = 10%, and D = 60/40.

Based on criteria in WisDOT's FDM and in AASHTO, an urban arterial includes:

- Side road intersection access limited to signalized intersections spaced at a maximum of 3 per mile to maintain a desirable operating speed of 40-mph (65-km/h).
- Parking prohibited.
- Driveways spaced a minimum of 500 feet (167 m) apart and limited to right-in and right-out access.

- Frontage roads at locations where driveway spacing is too close.
- Right and left turn lanes at all intersections and driveways.

All of the preliminary alternatives were based on the concept of providing a four-lane divided facility, and are discussed below in Sections 2.2.2, 2.2.3, and 2.2.4. Maps of the preliminary alternatives are also provided following the alternative descriptions for each segment in Figures 2.2.2, 2.2.3, and 2.2.4. Tables 2.2.2, 2.2.3, and 2.2.4 summarize the estimated impacts for the preliminary corridor alternatives that were shown at the first Public Information Meeting.

The preliminary alternatives discussed below are a complete range of alternatives considered. Some were carried forward as detailed study alternatives (often with modification), while some were dismissed from further consideration as not meeting the purpose and need requirements of this project or because other prudent and feasible alternatives with less significant adverse environmental disturbances existed. Through-town alternatives for the cities of Milton, Jefferson, and Watertown were studied in greater detail than other preliminary alternatives that were not carried forward. The relationship between the preliminary and the detailed study alternatives is shown schematically in Table 2.1.4.

With the construction of bypasses, the existing STH 26 route in Milton, Jefferson, and Watertown will need minor spot improvements to have adequate capacity to carry the projected remaining traffic volumes at a minimum LOS "D" in 2028, but roadway widening to provide additional through lanes would not be necessary. Minor improvements would include the addition of turn lanes, signalization, removal of parking, and other transportation safety related improvements.

2.2.2 South Segment (Segment 1)

The south segment preliminary study alternatives are described below. See Figure 2.2.2 for map locations of the preliminary alternatives, and Table 2.2.2 for a summary of estimated impacts.

2.2.2.1 Alternative 1A (Dismissed From Further Consideration)

Alternative 1A was a Milton far west bypass corridor that routed STH 26 along IH 90 from south of Milton to approximately 2-miles (3.2-km) north of CTH M. An additional northbound and southbound lane and wider structures on the median side of existing IH 90 would have been added in this area. From there, the STH 26 corridor would have diverged from IH 90 at an interchange and continued east on new alignment until reconnecting with the existing STH 26 facility near the Rock-Jefferson County Line. This alternative continued north, adding two additional lanes and a median to the existing roadway until connecting with the Fort Atkinson bypass.

Although this alternative offered an efficient truck route connection to IH 90, it would result in STH 26 traveling a short distance on IH 90. This would have conflicted with the purpose of the interstate system, which is for long distance trips; it is not intended to carry local traffic for short distances. Because additional lanes to handle the added STH 26 traffic and a new interchange would have been required on IH 90, this alternative had the highest cost. This route would have impacted additional wetlands along the south side of Lake Koshkonong. A new crossing of Otter Creek west of existing STH 26 would have had a higher potential for impacts to a federally listed threatened species (Prairie White-Fringed Orchid) identified near this location. This alternative had little or no local support because it impacted land use planned for farmland preservation, was located the farthest distance from the City of Milton, offered no access to their industrial park, and local jurisdictions would have incurred increased maintenance costs, as a significant length of existing STH 26 would become a local road. Other preliminary alternatives met

the purpose and need requirements for this project with fewer environmental disturbances and less cost. For these reasons, this alternative was not considered prudent and was dismissed from further consideration.

2.2.2.1 Alternative 1B (Dismissed From Further Consideration)

Similar in concept to Alternative 1A, Alternative 1B was a Milton near west bypass corridor that was developed to route STH 26 along IH 90 from south of Milton to approximately 0.6-mile (1-km) south of CTH M. An additional northbound and southbound lane and wider structures on the median side of existing IH 90 would have been added in this area. From there, the STH 26 corridor diverged from IH 90 at an interchange and continued northeast on new alignment, cut through the northwest corner of the City of Milton and through city-owned Forest Lake Park, then reconnected with existing STH 26 near CTH N. This alternative continued north adding two additional lanes and a median to the existing roadway until connecting with the Fort Atkinson bypass.

Similar to Alternative 1A, this alternative offered an efficient truck route connection to IH 90. However, it also resulted in STH 26 traveling a short distance on IH 90, which would have conflicted with the purpose of the interstate system. Because additional lanes and a new interchange would have been required on IH 90, this alternative had the second highest cost. This route would have crossed through a city park (Forest Lake Park) south of Mud Lake, and therefore would have been subject to Section 4(f) consideration. Little or no local support for this alternative existed because it would have impacted land use planned for farmland preservation and offered no access to their industrial park. Other preliminary alternatives existed that were considered prudent and feasible, met purpose and need requirements for this project, had fewer environmental disturbances, and cost less. For these reasons, this alternative was dismissed from further consideration.

2.2.2.2 Alternative 1C (Dismissed From Further Consideration)

Alternative 1C was a Milton near west bypass corridor that was developed to avoid routing STH 26 along a portion of IH 90. This alternative would have followed the existing STH 26 corridor from Janesville northeast until about 0.4 mile (0.6 km) south of Bingham Road. The alignment would have then curved north from a proposed interchange and continued on new alignment avoiding rural residential subdivisions. North of CTH M it would have followed the same alignment as Alternative 1B to the north end of the South Segment.

This alternative would not have required the use of IH 90, but due to the length of the route on relocation, it would have had the greatest farmland impacts, approximately 411 acres (166 ha). The estimated cost of Alternative 1C was $8 million higher than other bypass alternatives. This alternative would have required a structure crossing for the proposed Ice Age Trail. It also would have crossed through a city park (Forest Lake Park) south of Mud Lake similar to Alternative 1B, therefore would have been subject to Section 4(f) consideration. It would not have served the Milton industrial park, located on the east side of the city. The location of the south interchange close to the IH 90 and STH 26 interchange ramps and CTH Y would have hampered the free-flow movement of traffic between Janesville and Milton. Little or no local support was been shown for Alternative 1C. Other preliminary alternatives existed that were considered prudent and feasible, met the purpose and need requirements for this project, had fewer environmental disturbances, and cost less. For these reasons, this alternative was dismissed from further consideration.

2.2.2.3 Alternative 1D (Alternative S1) (Dismissed From Further Consideration)

Alternative 1D would have followed existing STH 26 through the City of Milton. Within the city, major features along STH 26 include the Milton House, a National Historic Landmark (NHL), three historic buildings listed on the NRHP, and five additional historic structures eligible to be on the NRHP. In addition, South and North Goodrich Park, East Elementary School, Milton East Cemetery, and residential and commercial property are adjacent to the existing roadway. The Wisconsin and Southern Railroad tracks cross existing STH 26 at grade just south of the Milton House.

From Janesville, Alternative 1D would have followed the existing STH 26 alignment northeast to just south of STH 59-East in the City of Milton, utilizing the rural 4-lane divided roadway constructed in 1999. The four-lane divided roadway would have continued through the City of Milton to STH 59-West as a four-lane urban section with curb & gutter and a median. A location map through Milton is shown on Figure 2.2.2.3. Expansion would have taken place primarily along the west side to avoid direct impact to the Milton House, a National Historic Landmark, as well as two adjacent historic sites. However, along the west side, portions of South Goodrich Park, East Elementary School, North Goodrich Park, and six historic sites either on or potentially eligible for the NRHP would have been directly impacted. North of STH 59-West, the alignment would have shifted to the east to avoid a cemetery and businesses located along the west.

Within the City of Milton, access would have been controlled and the number of existing access points substantially reduced consistent with urban arterial design standards. At-grade signalized intersections were proposed at St. Mary Street, STH 59-East, STH 59-West, and Bowers Lake Road. At Nelson Avenue, right-in/right-out access would have been allowed. The remaining roadways and driveways would have been closed to STH 26. Right and left-turn lanes would have been provided at the intersections. Parking would have been prohibited, and driveway access along STH 26 would have been allowed only along frontage roads. Additional frontage roads could have been required to maintain local road access through Milton. The posted speed limit would have been 45-mph (73-km/h) to maintain a desirable operating speed of 40-mph (65-km/h). Under this alternative, the Wisconsin & Southern Railroad crossing at STH 26, located just south of the Milton House, would approach the threshold for consideration of a grade separation structure in design year 2028, but constructing an overhead crossing would directly impact the historic Milton House.

Following the existing corridor, this alternative would have continued northerly adding two additional lanes and a median to the existing roadway from East Bowers Lake Road until connecting with the Fort Atkinson bypass and the beginning of the Central Segment. A diamond interchange was proposed at CTH N because this interchange has been identified as having a high incidence of crashes.

The through-town alternative in the City of Milton was studied on a continuous basis during much of the STH 26 Corridor Study. This alternative was studied in more detail than other preliminary alternatives that were dismissed to more thoroughly understand and weigh the associated impacts and to provide as much time as possible for the public to review and comment on the alternative. The alternative was shown to and discussed with study committees throughout the study. Alternative 1D was shown at the first public information meeting in June 1999 and impacts are shown on Table 2.2.2. After this meeting, Alternative 1D was renamed as Alternative S1 and shown at a second public information meeting in January 2000. Impacts for Alternative S1 are shown on Table 2.2.4.5.

Alternative 1D (S1) would have maximized the use of the existing corridor, resulting in low impacts to farmland and the natural environment near Milton, and would have had the lowest cost. However, the through town alternative in Milton would be subject to Section 4(f) considerations. The potential impacts on the historic resources (Milton House and eight other sites), as well as the potential impacts on the two parks, were sufficient to conclude that the alternatives carried forward for detailed study (S2 and S3) were feasible and prudent alternatives to Alternative 1D (S1). Historic preservation interests oppose widening the highway in its present location.

This alternative was not carried forward as one of the alternatives for detailed study because it would have had a number of adverse impacts within the City of Milton and because it would not have met project purpose and need requirements on a number of issues as described below.

- **Operating Speeds and Travel Time:** Given the regional importance of STH 26, an alternative that meets the purpose and need requirements for this project must maintain a reasonable average operating speed (~40-mph (65-km/h) urban, ~55-mph (89-km/h) rural). Intersections that remain open and available for 4-way traffic movements would require a signal for safety and effective operations. The through town alternative in Milton would have required four signalized intersections, thereby reducing the average operating speed through town to about 30-mph (48-km/h). With low operating speeds, this alternative does not meet the purpose and need requirements as an effective regional facility. Low operating speeds and increased travel time result in increased pollution and fuel consumption. This alternative does not meet the project purpose and need requirement of reducing congestion and travel time.

- **Truck Volumes:** As a designated truck route, STH 26 also needs to be improved as an efficient and safe truck route. Reducing truck volumes along existing STH 26 within the City of Milton has been an important concern to local residents throughout the study. This alternative does not reduce truck traffic in the city and does not fulfill the project purpose and need as an efficient and safe state truck route.

- **Community Circulation:** STH 26 is approximately one block east of one of Milton's two downtowns and travels through the eastern portion of the city. The existing route separates the majority of residents within Milton from significant assets that are enjoyed by the community at large. These include the Storrs Lake Wildlife Area and associated lakes and hiking areas, two golf courses, and a number of historic resources including the Milton House. With the reduction of cross streets that would have occurred under this alternative, traffic would have been required to circulate to signalized intersections to cross the route. This would have resulted in increased delays on side streets due to the concentration of vehicles at signalized intersections. As traffic volumes continue to increase along STH 26, the internal circulation of the community would have been disrupted. Pedestrian crossing and safety to get to the Milton House would have been adversely impacted. Access to and from the golf courses and the Storrs Lake Wildlife Area would have been hindered because it would have been necessary to cross a heavily trafficked highway to get to them. This alternative would have reduced the access to residential and commercial properties along the route. Alternative 1D (S1) does not meet the project purpose and need of accommodating the local access transportation needs of the community.

Below are other issues raised by the through-town alternative:

- **Historic Sites:** Milton's history is encompassed in the historic buildings within the city, many of which are along STH 26. With the construction of an alternative through town, these buildings would

be destroyed or adversely affected. The Milton House, a National Historic Landmark, is located on STH 26. Although this alternative would not directly impact this building, indirect impacts to the Milton House would be associated with this alternative. Approximately 8,000 individuals per year, including many school children, visit the Milton House and the surrounding related buildings. These individuals park their vehicles and school buses in North Goodrich Park across STH 26 from the Milton House. As volumes continue to increase on STH 26, pedestrians would incur increased delay crossing STH 26 and a higher potential for accidents. Additionally, representatives of the Milton House expressed concern that an increase in truck volume through the city would create more vibrations at their site and adversely impact the structural condition of the house. In order to avoid the Milton House on the east side of STH 26, the Goodrich House (eligible for NRHP) along the west side of STH 26 and seven other historic sites would be adversely affected. After the first public information meeting in June 1999, 177 postcards were received from the public stating opposition to the expansion of STH 26 along the existing route through Milton.

- **Local Support:** Through town alternatives have been discussed many times with local communities at study committee and public information meetings. Minimal favorable support has been shown by the way of verbal and written comments received for a through town alternative. After the first public information meeting, 177 postcard comments were received from the public opposing this alternative.

- **Relocations:** This alternative requires widening the existing STH 26 corridor through the city and would have required an estimated total of 32 relocations, of which approximately 27 are within the City of Milton causing significant disruption to the community.

- **Access:** Driveways and side street access disrupt the flow of traffic and present a major safety concern on high volume routes. Crossing or entering traffic on STH 26 at uncontrolled intersections becomes increasingly dangerous as traffic volumes increase on STH 26. In order to provide a safe and efficient transportation system, access at driveways and side streets would have been restricted to either right-in/right-out turns or eliminated completely. Traffic would have been routed to signalized intersections to allow safer movements for left-turns and crossing traffic.

2.2.2.4 Alternative 1E (Carried Forward as Detailed Study Alternative S2) (see Exhibit 5)

Alternative 1E is an alternative that generally follows the existing highway but with a relocated alignment through the eastern part of Milton that was developed to avoid impacts to eight historic properties, two parks, a school, and a cemetery associated with a through town corridor. This alternative follows and makes use of the existing rural 4-lane divided roadway constructed in 1999 from Janesville northeast until about Town Line Road. The alignment then continues on new alignment curving approximately 2,000 feet (610 m) east of existing STH 26 and the Milton House. North of STH 59-East, the alignment then curves back and crosses the existing STH 26 corridor about 0.3-mile (0.5 km) north of STH 59-West, avoiding two golf courses and residential subdivisions. A grade separation crossing of existing STH 26 is proposed to allow the existing corridor to remain in place, providing access to numerous existing residential homes and the two golf courses north and east of the city. This alternative then curves northerly remaining about 1,000 feet (305 m) west of the existing STH 26 corridor until it rejoins the existing corridor about 0.2-mile (0.3 km) south of Klug Road. Diamond interchanges are proposed west of the city at a relocation of STH 59-East to provide better access between Janesville and Whitewater, and north of the city at a new road extension of Bowers Lake Road.

Following the existing corridor to the end of the South Segment, this alternative continues northerly adding two lanes and a median to the existing roadway. A diamond interchange is proposed at CTH N because this area has been identified as having a high incidence of crashes.

This alternative has low cost, minimizes farmland and natural environment impacts, and provides interchange locations that better serve the City of Milton and their industrial park. This alternative is a prudent and feasible alternative to the Section 4(f) considerations associated with a through town alternative. This alternative also offers a connection of IH 90 (Janesville) to STH 59-East (Whitewater) without passing through Milton. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative S2.

2.2.2.5 Alternative 1F (Carried Forward as Detailed Study Alternative S3) (see Exhibit 5)

Alternative 1F is an alternative that generally follows the existing highway alignment but includes a near east Milton bypass corridor developed to avoid impacts to eight historic properties, two parks, a school, and a cemetery associated with a through town route. The bypass alignment follows along a narrow corridor between the city and the Storrs Lake Wildlife Area. This alternative follows and makes use of the existing rural four-lane divided roadway constructed in 1999 from Janesville northeast until about Town Line Road. The alignment then continues on new alignment curving to the north and remaining approximately 2,000 feet (610 m) east of existing STH 26, avoiding the Storrs Lake Wildlife Area, two golf courses, and one of two residential subdivisions. This alternative returns to the existing alignment about 1.5 miles (2.4 km) north of Milton near John Paul Road. Diamond interchanges are proposed west of the city at a relocation of STH 59-East, and at Klug Road to the north.

Following the existing corridor, this alternative continues northerly adding two lanes and a median to the existing roadway from John Paul Road until it connects with the Fort Atkinson bypass and the beginning of the Central Segment. A diamond interchange is proposed at CTH N.

This alternative would offer many of the advantages of Alternative 1E including low cost, low farmland and natural environment impacts, and interchanges that better serve the City of Milton and their industrial park. This alternative is also a prudent and feasible alternative to the Section 4(f) considerations associated with a through town alternative along the existing alignment. This alternative would offer a connection of IH 90 (Janesville) to STH 59 East (Whitewater) without passing through Milton. This route would pass close to the Storrs Lake Wildlife Area and would impact a new residential development. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative S3.

2.2.2.6 Alternative 1G (Dismissed From Further Consideration)

Alternative 1G was an east Milton bypass corridor. It would have followed the Alternative 1F alignment from Janesville to about Klug Road north of Milton, where it would have continued north on new alignment until returning to the existing STH 26 alignment near County Line Road. From there, this alternative would have continued north, adding two lanes and a median to the existing roadway from County Line Road until connecting with the Fort Atkinson bypass.

This alternative had a low cost and served the City of Milton and their industrial park. However, this alternative had more farmland and right-of-way conversion than similar Alternative 1F. Since Alternative 1F (S3) was similar to Alternative 1G, and was considered a prudent and feasible alternative that met the

purpose and need requirements for this project and had fewer land and other environmental disturbances, Alternative 1G was dismissed from further study.

2.2.2.7 Alternative 1H (Dismissed From Further Consideration)

Alternative 1H included a far east Milton bypass corridor developed to route STH 26 east of the city and the Storrs Lake Wildlife Area. From Janesville, this alternative would have followed the existing rural 4-lane divided roadway northeast to the area of Town Line Road, then continued on new alignment, crossing STH 59 East about 1.5 miles (2.4 km) east of existing STH 26. The alternative would have continued north avoiding the Storrs Lake Wildlife Area, then returned to the existing STH 26 alignment 4.7-miles (7.6-km) north of Milton near County Line Road. From there, this alternative would have continued north, adding two lanes and a median to the existing roadway from County Line Road until connecting with the Fort Atkinson bypass.

Alternative 1H would have had the highest amount of right-of-way conversion, impacts to approximately 396 acres (160 ha) of farmland, and the longest route on relocation. A proposed interchange at CTH N would not have served the City of Milton. Local jurisdictions would have incurred increased maintenance costs, as a significant length of existing STH 26 would remain as a local road. A new stream crossing of Otter Creek would have been required. Other preliminary alternatives existed that were considered prudent and feasible, met the purpose and need requirements for this project, and had less land and other environmental disturbances. For these reasons, this alternative was dismissed from further consideration.

2.2.2.8 Alternative 1JP (Dismissed From Further Consideration)

Alternative 1JP was a near west alternative that was developed to route STH 26 traffic along the CTH Y/John Paul Road corridor through the City of Milton. This alternative would have followed the existing STH 26 corridor from Janesville northeast about 0.4-mile (0.6-km). At that point the alignment would have followed CTH Y/John Paul Road north through the City of Milton, returning to the existing STH 26 alignment near CTH N north of Milton. Along the CTH Y/John Paul Road corridor, access would have been controlled and the number of existing access points substantially reduced. Diamond interchanges were proposed near CTH Y and existing STH 26 south of Milton, and at CTH N north of Milton. From CTH N, this alternative would have continued north, adding two lanes and a median to the existing roadway until connecting with the Fort Atkinson bypass.

Although Alternative 1JP would have had low farmland impacts, it also had an extremely high number of relocations (110). The corridor has both commercial and residential developments that have access directly onto John Paul Road. Local access would have been restricted and frontage roads would have been utilized. The interchange locations would not have served the City of Milton, and no access would have been provided to STH 59. Alternative 1JP had no local support. This alternative would not meet the purpose and need requirements for this project in providing a transportation system consistent with state planning efforts and the intended highway function as a route of national, state, regional and local importance. It would not have minimized adverse environmental disturbances, particularly in the amount of relocations, and it would not support the local community needs and interests. For these reasons, it was dismissed from further consideration.

2.2.3 Central Segment (Segment 2)

The central segment preliminary alternatives are described below. See Figure 2.2.3 for map location of the preliminary alternatives, and Table 2.2.3 for a summary of estimated impacts.

2.2.3.1 Alternative 2A1 (Dismissed From Further Consideration)

Alternative 2A1 included a far west Jefferson bypass corridor. It would have diverged from the existing Fort Atkinson bypass alignment about 4.5 miles (7.3 km) south of Jefferson near USH 12. Heading north, the alternative would have crossed USH 18 between STH 89-North and STH 89-South, and returned to the existing STH 26 alignment about 2.8 miles (4.5 km) north of Jefferson. Interchanges were proposed at USH 12 and Hoard Road to the south, at USH 18 to the west, and at Jefferson Road to the north. After joining the existing alignment north of Jefferson, this alternative would have continued north, adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y.

Other than providing a reasonable crossing of the Crawfish River, the remaining natural environment impacts of Alternative 2A1 were high. This alternative would have impacted approximately 468 acres (189 ha) of farmland and required approximately 513 acres (208 ha) of right-of-way acquisition. The north and south interchanges would have been located over 3 miles (4.8 km) from the City of Jefferson, offering little benefit to the city or the industrial parks. All west side bypass alternatives would require two river crossings (Rock and Crawfish Rivers) as compared to one river crossing (Rock River) for east side alternatives, and would have a high potential for archeological impacts. Due to the length of route on relocation, local jurisdictions would have incurred increased maintenance costs as a significant length of existing STH 26 would remain. Little or no local support was shown for Alternative 2A1. Other preliminary alternatives existed that met purpose and need requirements for this project and that had fewer environmental disturbances. For these reasons, this alternative was dismissed from further consideration.

2.2.3.2 Alternative 2A2 (Dismissed From Further Consideration)

Alternative 2A2 included a far west Jefferson bypass corridor. From the south limits of the Central Segment, this alternative would have followed the existing alignment of the Fort Atkinson bypass with the addition of two lanes and median within the existing right-of-way. The alternative would have left the existing Fort Atkinson bypass alignment about 3.9 miles (6.3 km) south of Jefferson near Banker Road. Heading north, the alternative would have crossed USH 18 between STH 89-North and STH 89-South, and returned to the existing STH 26 alignment about 2.1 miles (3.4 km) north of Jefferson near Biederman Drive. Interchanges were proposed near Banker Road to the south, at USH 18 to the west, and at Jefferson Road to the north. After joining the existing alignment north of Jefferson, this alternative continued north, adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y.

The only significant difference between Alternative 2A2 and Alternative 2A1 was the location of the Rock River crossing and the north interchange. All associated impacts of Alternative 2A1 discussed above were very similar to Alternative 2A2. Little or no local support was shown. Other preliminary alternatives existed that met the purpose and need requirements for this project and had fewer environmental disturbances. This alternative was dismissed from further consideration.

2.2.3.3 Alternative 2B (Dismissed From Further Consideration)

Alternative 2B included a near west Jefferson bypass corridor closer to Jefferson, except for the southern interchange. From the south limits of the Central Segment, this alternative would have followed the existing alignment of the Fort Atkinson bypass with the addition of two lanes and a median within the existing right-of-way. The alternative would have left the existing Fort Atkinson bypass alignment about

4.5 miles (7.3 km) south of Jefferson near Banker Road. Heading north, the alternative would have crossed USH 18 about 0.5 miles (0.8 km) east of STH 89-South, and returned to the existing STH 26 alignment about 1.1 miles (1.8 km) north of Jefferson near Jahn Lane. Interchanges were proposed at USH 12 and Hoard Road to the south, at USH 18 to the west, and near Junction Road to the north of Jefferson.

After joining the existing alignment north of Jefferson, this alternative would have continued north adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y.

Although Alternative 2B would have provided a favorable north interchange location, the south interchange location would not have served the City of Jefferson or the industrial parks. Similar alternatives 2C and 2D offered a better south interchange location and fewer natural environment impacts. Alternative 2B received little or no local support. Other preliminary alternatives existed that met purpose and need requirements for this project with fewer environmental disturbances. This alternative was dismissed from further consideration.

2.2.3.4 Alternative 2C (Carried Forward as Detailed Study Alternative C1) (see Exhibit 6)

Alternative 2C includes a near west Jefferson bypass corridor. From the south limits of the Central Segment, this alternative follows the existing alignment of the Fort Atkinson Bypass with the addition of two lanes and a median to the existing roadway (within the existing right-of-way) until it heads off on relocation. The alternative leaves the existing alignment about 2.3 miles (3.6 km) south of Jefferson at Business 26. Heading north, the alternative crosses USH 18 about 0.5 miles (0.8 km) east of STH 89-South, and returns to the existing STH 26 alignment about 1.1 miles (1.8 km) north of Jefferson near Jahn Lane. Diamond interchanges are proposed at Business 26 to the south, CTH W to the southwest, USH 18 to the west, and Junction Road to the north. Structures over the Crawfish River and Rock River would be required.

After joining the existing alignment north of Jefferson, this alternative continues adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y. Grade separation structures are proposed at the Union Pacific Railroad tracks and CTH Y. At-grade intersections are proposed at Biederman Drive and Jefferson Road.

Alternative 2C provides interchange locations that serve the City of Jefferson and the industrial parks. As Jefferson and Fort Atkinson continue to expand towards each other, Alternative 2C allows existing STH 26 to become a local road connecting these communities. STH 26 would have freeway access control standards from south of Fort Atkinson to north of Jefferson. In order to reduce impacts to wetlands and floodplains near the Crawfish River, this alternative was modified to include a river crossing farther west of Jefferson. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative C1.

2.2.3.5 Alternative 2D (Carried Forward as Detailed Study Alternative C2) (see Exhibit 6)

Alternative 2D is a near west Jefferson bypass corridor that utilizes more of the existing STH 26 corridor alignment between Fort Atkinson and Jefferson. From the south limits of the Central Segment, this alternative follows the existing alignment of the Fort Atkinson Bypass and existing STH 26 between Fort Atkinson and Jefferson with the addition of two lanes and a median to the existing roadway until it heads off on relocation. This alternative leaves the existing alignment about 1.5 miles (2.4 km) south of

Jefferson. It then parallels existing STH 26 before heading west and crossing over the Union Pacific Railroad tracks about 0.8 miles (1.3 km) south of Jefferson. Heading northerly, the alternative crosses USH 18 about 0.5 miles (0.8 km) east of STH 89-South, and returns to the existing STH 26 alignment about 1.1 miles (1.8 km) north of Jefferson near Jahn Lane. Proposed interchanges include a trumpet west of the Union Pacific Railroad tracks to the south, a diamond at USH 18 to the west, and a diamond at a realignment of Junction Road to the north of Jefferson. Structures over the Crawfish River and Rock River would be required.

After joining the existing alignment north of Jefferson, this alternative continues northerly adding two lanes and a median to the existing roadway before matching the proposed four lane improvement at Johnson Creek near CTH Y. Grade separation structures are proposed at the Union Pacific Railroad tracks and CTH Y. At-grade intersections are proposed at Biederman Drive and Jefferson Road.

Alternative 2D also provides interchange locations that serve the City of Jefferson and the industrial parks, and it minimizes impacts to farmland as compared with Alternative 2C. The corridor passes through a floodplain near the Crawfish River. This alternative maximizes the use of the existing corridor; however, in doing so, this alternative does not provide a local road connection between Jefferson and Fort Atkinson. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative C2.

2.2.3.6 Alternative 2E (Alternative C5) (Dismissed From Further Consideration)

Alternative 2E would have followed existing STH 26 through the City of Jefferson. A location map through Jefferson is shown on Figure 2.2.3.6. Within the city, major features along STH 26 include the Main Street Commercial Historic District. This NRHP district encompasses over 40 structures on 12 blocks in Jefferson's traditional downtown. Twenty-five of the contributing buildings are located adjacent to existing STH 26. The Jefferson Public Library, also on the NRHP, is adjacent to existing STH 26, as are eight other potentially eligible historic sites. The Jefferson County Courthouse, Jefferson City Hall, a portion of the traditional downtown, and numerous residential and commercial buildings are all adjacent to existing STH 26.

Alternative 2E would have followed the existing highway alignment from the Fort Atkinson bypass to CTH Y in the City of Johnson Creek, passing through the City of Jefferson. From the south limits of the Central Segment to the south corporate limits of Jefferson, this alternative would have incorporated the addition of two lanes and a median to the existing roadway. A four-lane divided urban arterial roadway would have followed the existing corridor through the City of Jefferson. Within the city, access would have been controlled and the number of access points substantially reduced. Many public road intersections would have been closed and driveway access allowed only along frontage roads. Additionally, parking would have been eliminated along the highway. The posted speed limit would have been 45-mph (73-km/h) to maintain a desirable operating speed of 40-mph (65-km/h).

From the north corporate limits of Jefferson, this alternative would have continued north, adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y.

The through town alternative in the City of Jefferson was studied on a continuous basis during much of the STH 26 Corridor Study. This alternative was studied in more detail than other preliminary alternatives that were dismissed to more thoroughly understand and weigh the associated impacts and to provide as much time as possible for the public to review and comment on the alternative. The alternative

was shown and discussed with study committees throughout most of the study. Alternative 2E was shown at the first public information meeting in June 1999 and impacts are shown on Table 2.2.3. After this meeting, Alternative 2E was renamed as Alternative C5 and shown at a second public information meeting in January 2000. Impacts for Alternative C5 are shown on Table 2.2.4.5.

Alternative 2E (C5) would have maximized the use of the existing corridor, resulting in low impacts to farmland and the natural environment near Jefferson, and would have had the lowest cost. However, the through town alternative in Jefferson would have been subject to Section 4(f) considerations. The potential impacts on the historic resources, including the Main Street Commercial Historic District and the other nine historic sites, were sufficient to conclude that the alternatives carried forward for detailed study (C1, C2, C3, and C4) were feasible and prudent alternatives to the through town alternative. In addition, the residential and business relocations with a through town alternative were considered significant.

This alternative was not carried forward as one of the alternatives for detailed study because it would have had a number of adverse impacts in the City of Jefferson and because it would not have met project purpose and need requirements on a number of issues as described below.

- **Operating Speeds and Travel Time:** Given the regional importance of STH 26, an alternative that meets the purpose and need for this project must maintain a reasonable average operating speed (~40-mph (65-km/h) urban, ~55-mph (89-km/h) rural). Intersections that remain open for 4-way traffic movement would require a signal for safe and effective operations. A through town alternative in Jefferson would have required four signalized intersections thereby reducing the average operating speed through town to about 30-mph (48-km/h). With low operating speeds, this alternative does not meet the purpose and need as an effective regional transportation facility. Low operating speeds and increased travel time results in increased pollution and fuel consumption. This alternative does not meet the project purpose and need requirement of reducing congestion and travel time.

- **Truck Volumes:** As a designated truck route, STH 26 also needs to be improved as an effective and safe truck route. Reducing truck volumes within the City of Jefferson has been an important concern to local residents throughout the study. This alternative does not reduce truck traffic in the city and does not meet the project purpose and need as an efficient and safe state truck route.

- **Crashes:** High traffic and truck volumes are a safety concern to motorists and pedestrians within the city. The crash rate on STH 26 within the City of Jefferson exceeded the statewide average crash rate in four of the five years from 1994 to 1998. STH 26 in Jefferson was improved in 1999 as a 2-lane facility with turn lanes. As traffic volumes continue to increase, the potential for crashes increases. Pedestrian crossings also become increasingly dangerous in downtown areas where pedestrian volumes are typically the highest. This alternative would not meet the project purpose and need of enhancing highway safety on STH 26.

- **Community Circulation:** A major route with high traffic volumes through the center of Jefferson is disruptive to the internal circulation of the community. With the reduction of cross streets along STH 26 that would have occurred with this alternative, traffic would have been required to circulate to signalized intersections to cross the route. This would have resulted in increased delays on side streets due to the concentration of vehicles at signalized intersections. This alternative would have reduced the access to residential and commercial properties along the route. Traffic circulation to the school complexes and the county fairgrounds on the west side of Jefferson would have become more

difficult from the east side. Alternative 2E (C5) does not meet the project purpose and need of accommodating the local access transportation needs of the community.

Below are other issues raised by the through-town alternative:

- **Historic Sites:** Jefferson's history is encompassed in the historic buildings within the city, many of which are along STH 26. With the construction of an alternative through town, many of these buildings would be destroyed or adversely affected. Twenty-five buildings that contribute to the Main Street Commercial Historic District (NRHP) are adjacent to existing STH 26 and would be adversely impacted by this alternative. Also, nine potentially historic structures in addition to the historic district would be adversely impacted by this alternative.

- **Local Support:** Through town alternatives have been discussed many times with local communities at study committee and public information meetings. In March of 2000, the Jefferson Chamber of Commerce expressed written support for a bypass (see Appendix A). In April of 2000, the City of Jefferson passed a resolution supporting the construction of a bypass (see Appendix A). Minimal favorable support has been shown by the way of verbal and written comments received for a through town alternative.

- **Relocations:** This alternative requires a widening of the existing STH 26 corridor, and would require an estimated total of 118 relocations of which approximately 113 are within the City of Jefferson causing significant disruption of the community.

- **Environmental Issues:** The through town alternative would require a four-lane Rock River crossing in Jefferson and a Section 404 permit for discharge of dredged or fill material.

- **Noise:** Traffic noise, trucks in particular, would impact properties along STH 26 in a narrow corridor through Jefferson's central area. In urban areas where traffic and pedestrian access is important to businesses and homes along the route, a noise barrier would not be practical or effective.

- **Access:** Driveways and side street access disrupt the flow of traffic and present a major safety concern on high volume routes. Crossing or entering traffic on STH 26 at uncontrolled intersections becomes increasingly dangerous as traffic volumes increase on STH 26. In order to provide a safe and efficient transportation system, access at driveways would be eliminated or substantially reduced in number, and side streets would be restricted to either right-in/right-out or eliminated completely. Traffic would be routed to signalized intersections to allow safer movements for left-turns and crossing traffic. With an increase in traffic at intersections, pedestrian crossings would become more difficult and hazardous. Parking, particularly in downtown areas, would become increasing difficult. These factors would result in adverse community impacts on residents and businesses located along the STH 26 corridor.

2.2.3.7 Alternative 2F (Carried Forward as Detailed Study Alternative C3) (see Exhibit 6)

Alternative 2F includes a near east Jefferson bypass corridor. From the south limits of the Central Segment, this alternative follows the existing alignment of the Fort Atkinson Bypass and existing STH 26 with the addition of two lanes and a median to the existing roadway until it heads off on relocation. The alternative leaves the existing alignment 0.8 miles (1.3 km) south of Jefferson. Heading east and north, the alternative crosses USH 18 about 1,000 feet (305 m) west of CTH Y, and returns to the existing STH 26 alignment about 0.8 miles (1.3 km) north of Jefferson near the Glacial Drumlin Trail. Proposed

interchanges include a trumpet to the south, a partial cloverleaf at USH 18 to the east, and a diamond at Junction Road to the north of Jefferson. A structure over the Rock River would be required.

After joining the existing alignment north of Jefferson, this alternative continues northerly adding two lanes and a median to the existing roadway before matching the proposed four-lane improvement at Johnson Creek near CTH Y. Grade separation structures are proposed at the Union Pacific Railroad tracks and CTH Y. At-grade intersections are proposed at Biederman Drive and Jefferson Road.

This alternative has relatively low floodplain and wetland impacts. This can be attributed to east side alternatives requiring only one river crossing (Rock River) as compared to two river crossings (Rock River and Crawfish River) for west side alternatives. Alternative 2F maximizes the use of the existing corridor and requires the lowest amount of right-of-way acquisition (381 acres; 154 ha) of the bypass alternatives. Interchanges are located close to the City of Jefferson and their industrial parks. This alternative passes through and near property owned by St. Coletta's. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative C3.

2.2.3.8 Alternative 2G (Dismissed From Further Consideration)

Alternative 2G included a near east Jefferson bypass extending north on relocation along CTH Y. This alternative followed the Alternative 2F alignment from the south limits of the Central Segment to just north of USH 18 east of Jefferson. The alternative then would have headed northeasterly along the CTH Y corridor north until matching the proposed four-lane improvement at Johnson Creek near CTH Y.

The north interchange would not have served the City of Jefferson as well as similar Alternative 2F. This alternative passed through and near property owned by St. Coletta's. Due to the length of route on relocation, local jurisdictions would have incurred increased maintenance costs as a significant length of existing STH 26 would remain. Alternative 2G would have impacted a greater number of farms (43) as compared to Alternative 2F (34). Other preliminary alternatives existed that met the purpose and need requirements for this project with fewer environmental disturbances. This alternative was dismissed from further consideration.

2.2.3.9 Alternative 2H (Carried Forward as Detailed Study Alternative C4) (see Exhibit 6)

Alternative 2H is a far east Jefferson bypass corridor that extends northerly on relocation along the CTH Y corridor. From the south limits of the Central Segment, this alternative follows the existing alignment of the Fort Atkinson Bypass with the addition of two lanes and a median to the existing roadway (within the existing right-of-way) until it heads off on relocation. The alternative leaves the existing STH 26 alignment heading east about 2.3 miles (3.7 km) south of Jefferson, and crosses the Rock River. Heading north, the alternative crosses USH 18 about 0.8 miles (1.3 km) east of CTH Y, joining the CTH Y alignment near Junction Road. Continuing north, the alternatives follows the CTH Y alignment until it matches the proposed four-lane improvement at Johnson Creek near CTH Y. Diamond interchanges are proposed at Business 26 to the south, USH 18 to the east, and existing STH 26 to the north of Jefferson. Grade separation structures are proposed at CTH K, Buena Vista Road, CTH N, Vogel Road, CTH Y, Hopen Road, Town Line Road, Junction Road, Marsh Road, Glacial Drumlin Trail, and Wright Road. Between Junction Road and Wright Road, a frontage road is proposed. A structure over the Rock River is required.

Alternative 2H has a high impact to farmland and requires a large amount of right-of-way acquisition. Traffic circulation under this alternative is not desirable since traffic on USH 18 between the City of

Jefferson and the interchange at STH 26 will be routed past the St. Coletta's establishment through a narrow right-of-way section. However, in order to compare alternatives that impact property owned by St. Coletta's, a second east avoidance alternative was carried forward. This alternative has since been modified to follow the alignment of Alternative 2F south of Jefferson before heading further east at the southeast corner of Jefferson. The corridor would run parallel to the west of CTH Y north of Jefferson. Alternative 2H, as modified, met the purpose and need requirements for this project and was carried forward for detailed study as Alternative C4.

2.2.4 North Segment (Segment 3)

The north segment preliminary alternatives are described below. See Figure 2.2.4 for map locations of the preliminary alternatives, and Table 2.2.4 for a summary of estimated impacts.

2.2.4.1 Alternative 3A (Dismissed From Further Consideration)

Alternative 3A included a far west Watertown bypass corridor. From the south limits of the North Segment, this alternative would have followed the existing STH 26 alignment with the addition of two lanes and a median to the existing roadway. The alternative would have left the existing alignment about 2.8 miles (4.5 km) south of Watertown near Emerald Drive, crossed STH 19 approximately 1,500 feet (460 m) west of CTH K, and returned to the existing alignment 3.6 miles (5.8 km) north of Watertown near CTH JM. Interchanges were proposed at Ebenezer Road to the south, STH 19 to the west, and Five Mile Road to the north of Watertown. After joining the existing alignment north of Watertown, this alternative would have continued north, adding two lanes and a median to the existing roadway until reaching the northern project terminus at STH 60-East.

Alternative 3A would have had approximately 665 acres (269 ha) of farmland impacts, the highest of the west bypass alternatives. The interchanges would have been located about five miles from the City of Watertown and their industrial parks. Due to the length of route on relocation, local jurisdictions would have incurred increased maintenance costs as a significant length of existing STH 26 would become a local road. Alternative 3A had little or no local support. Other preliminary alternatives existed that met the purpose and need requirements for this project with fewer environmental disturbances. This alternative was dismissed from further consideration.

2.2.4.2 Alternative 3B (Dismissed From Further Consideration)

Alternative 3B included a far west Watertown bypass corridor. This alternative followed the Alternative 3A alignment from the south limits of the North Segment to Provimi Road. North of Provimi Road, Alternative 3B headed east and northeast, returning to the existing alignment 1.6 miles (2.6 km) north of Watertown near CTH Q. Interchanges were proposed at Ebenezer Road to the south, STH 19 to the west, and CTH Q to the north of Watertown. After joining the existing alignment north of Watertown, this alternative continued north, adding two lanes and a median to the existing roadway until the northern project terminus at STH 60-East.

Alternative 3B had negative impacts similar to those of Alternative 3A. The location of the north interchange closer to Watertown was the only benefit of this alternative compared to Alternative 3A. This alternative had little or no local support. Other preliminary alternatives existed that met the purpose and need requirements for this project with fewer environmental disturbances. This alternative was dismissed from further consideration.

2.2.4.3 Alternative 3C (Carried Forward as Detailed Study Alternative N1) (see Exhibit 7)

Alternative 3C includes a near west Watertown bypass corridor. The bypass corridor is within the approved Watertown urban service area boundaries. From the south limits of the North Segment, this alternative follows the existing alignment of STH 26 with the addition of two lanes and a median to the existing roadway until it heads off on relocation. The alternative leaves the existing alignment about 0.5 miles (0.8 km) south of Watertown near Turf Drive, crosses STH 19 approximately 2000 feet (610 m) east of CTH K, and returns to the existing alignment at the north corporate limits of Watertown at the existing STH 26/STH 16 interchange. This is the only alternative that provides a direct bypass connection for both STH 26 and STH 19 to the STH 16 interchange and offers free-flow movement to STH 16-East. Proposed interchanges are a trumpet near Turf Drive to the south, a diamond at STH 19 to the west, and a cloverleaf at STH 16 to the north of Watertown. A structure over the Rock River would be required.

After joining the existing alignment north of Watertown, this alternative continues northerly adding two lanes and a median to the existing roadway until the northern project terminus at STH 60-East.

Alternative 3C would have the fewest farmland impacts of the west bypass alternatives. Interchanges are located close to the City of Watertown and its industrial parks. The connection with the STH 16 bypass north of Watertown provides a distinct traffic system benefit to the area for traffic wanting to avoid downtown. West of Watertown, this alternative offers an efficient route to the Watertown hospital located along the STH 16 bypass. Alternative 3C has received favorable local support. This alternative met the purpose and need requirements for this project, and was carried forward for detailed study as Alternative N1.

2.2.4.4 Alternative 3D (Alternative N3) (Dismissed From Further Consideration)

Alternative 3D would have followed existing STH 26 through the City of Watertown. A location map through the city of Watertown is shown on Figure 2.2.4.4. Within the city, major features along STH 26 include a crossing of the Rock River, significant historic properties, numerous residential and commercial properties, and numerous side road intersections. Two separate historic districts are located north and south of STH 19 adjacent to STH 26. These historic sites are identified as the North Washington Historic District with 35 buildings adjacent to STH 26, and the South Washington Historic District with 14 buildings adjacent to STH 26. In addition to these two historic districts, four other historic sites, including the St. Bernard Catholic Church complex at the intersection of STH 19 and STH 26, are adjacent to existing STH 26. St. Henry Cemetery is located along the east side of STH 26 near the entrance to the Watertown High School on the north side of Watertown.

From the south limits of the North Segment to the south corporate limits of Watertown, Alternative 3D would have followed the existing STH 26 alignment with the addition of two lanes and a median to the existing roadway.

A four-lane divided urban arterial roadway would have followed the existing corridor through Watertown. Access would have been controlled with signalized intersections located only at Air Park Drive, Jefferson Road (CTH Y), Boomer Street, Omena Street, Bernard Street, Milwaukee Street, Main Street (STH 19), Elm Street, and Spaulding Street. Spaulding Street would have been extended west to connect with Endeavor Drive. Right-turn lanes and single or dual left-turn lanes would have been provided at all intersections. Right-in/right-out access would have been provided at Stimpson Street, Cady Street, and

Union Street-South. Additionally, parking would have been prohibited, and driveway access provided along frontage roads only. The posted speed limit would have been 45-mph (73-km/h) to maintain a desirable operating speed of 40-mph (65-km/h).

From the north corporate limits of Watertown to the northern project terminus at STH 60-East, this alternative would have followed the existing alignment of STH 26 with the addition of two lanes and a median to the existing roadway. A modification of the existing STH 16/STH 26 trumpet interchange would have been required. STH 60-East would have been realigned to connect with STH 60-West at a proposed diamond interchange. Frontage roads would have been required at certain locations to maintain the minimum 500-foot (153-m) spacing between driveway access along the highway. The existing alignment would have been reconstructed to meet the 70-mph (113-km/h) design standard for a rural highway.

The through town alternative in the City of Watertown was studied on a continuous basis during the STH 26 Corridor Study. This alternative was studied in more detail than other preliminary alternatives that were dismissed earlier to more thoroughly understand and weigh the associated impacts and to provide as much time as possible for the public to review and comment on the alternative. The alternative was shown and discussed with study committees throughout most of the study. Alternative 3D was shown at the first public information meeting in June 1999 and impacts are shown on Table 2.2.4. After this meeting, Alternative 3D was renamed as Alternative N3 and shown at a second public information meeting in January 2000. Impacts for Alternative N3 are shown on Table 2.2.4.5.

Alternative 3D (N3) would have maximized the use of the existing corridor, resulting in low impacts to farmland and the natural environment near Watertown, and would have had a lower cost. However, the through town alternative in Watertown would be subject to Section 4(f) considerations. The potential impacts on the historic resources, including the two historic districts and the other four historic sites, were sufficient to conclude that the alternatives carried forward for detailed study (N1 and N2) were feasible and prudent alternatives to the through town alternative. In addition, the residential and business relocations and community impacts with a through town alternative were considered significant.

This alternative was not carried forward as one of the alternatives for detailed study because it would not have met project purpose and need requirements in a number of ways as described below and because it would have had a number of adverse impacts within the City of Watertown.

- **Operating Speeds and Travel Time:** Given the regional function and importance of STH 26, an alternative that meets the purpose and need for this project must maintain a reasonable average operating speed (~40-mph (65-km/h) urban, ~55-mph (89-km/h) rural). Intersections that remain open for 4-way traffic movement would require a signal for safety and effective operations. A through town alternative in Watertown would have required nine signalized intersections, thereby reducing the average operating speed through town to less than 25-mph (40-km/h). With low operating speeds, this alternative does not meet the purpose and need as an efficient regional facility. Low operating speeds and increased travel time results in increased air pollution and fuel consumption. This alternative does not meet the project purpose and need of reducing congestion and travel time.

- **Truck Volumes:** As a designated truck route, STH 26 also needs to be improved as an efficient and safe truck route. Reducing truck volumes within the City of Watertown has been an important concern to city and town residents throughout the study. This alternative does not reduce truck traffic in the city and does not meet the project purpose and need as an efficient and safe state truck route.

- **Crashes:** High traffic and truck volumes are a safety concern to motorists and pedestrians within the city. The crash rate on STH 26 within the City of Watertown exceeded the statewide average crash rate from 1994 to 1998. As traffic volumes continue to increase, the potential for crashes increases. Pedestrian crossings also become increasingly dangerous in downtown areas where pedestrian volumes are typically the highest. This alternative does not meet the project purpose and need of enhancing highway safety on STH 26.

- **Community Circulation:** A major route with high traffic volumes through the center of Watertown is disruptive to the internal circulation of the community. With the reduction of cross streets along STH 26 that would occur with this alternative, traffic would have been required to circulate to signalized intersections to cross the route. This would have resulted in increased delays on side streets due to the concentration of vehicles at signalized intersections. STH 26 is the major north-south road in Watertown, and this alternative would have reduced the access to residential and commercial properties along the route, again causing disruptive circulation within the community. Alternative 3D (N3) does not meet the project purpose and need of accommodating the local access transportation needs of the community.

Below are other issues raised by the through-town alternative:

- **Historic Sites:** Watertown's history is encompassed in the historic buildings within the city, many of which are along STH 26. With the construction of a through-town alternative, all of many historic buildings along STH 26 would be adversely affected or destroyed. Forty-nine buildings within two historic districts along STH 26, and four other historic sites including the St. Bernard Catholic Church complex, would be adversely impacted, with some sites destroyed by this alternative.

- **Local Support:** Through town alternatives have been discussed many times with local communities at study committee and public information meetings. The City of Watertown passed a resolution supporting the construction of a bypass.

- **Relocations:** This alternative requires a widening of the existing STH 26 corridor, and would require an estimated total of 156 relocations of which approximately 133 are within the City of Watertown causing significant disruption of the community.

- **Environmental Issues:** The through town alternative would require a Rock River crossing and a Section 404 permit for discharge of dredged or fill material.

- **Noise:** Traffic noise, trucks in particular, would impact properties along STH 26 within the City of Watertown. In urban areas where traffic and pedestrian access is important to businesses and homes along the route, a noise barrier would not be practical or effective. This alternative would not reduce traffic noise within the city.

- **Access:** Driveways and side street access disrupt the flow of traffic and present a major safety concern on high volume routes. Crossing or entering traffic on STH 26 at uncontrolled intersections becomes increasingly dangerous as traffic volumes increase on STH 26. In order to provide a safe and efficient transportation system, access at driveways and side streets would be restricted to either right-in/right-out or eliminated completely. Traffic would be routed to signalized intersections to allow safer movements for left-turns and crossing traffic.

2.2.4.5 Alternative N3R (Dismissed From Further Consideration)

A second through town alternative that partially followed a railroad corridor in the City of Watertown was developed based on discussions with a Study Committee member at a Town of Watertown meeting in December 1999. A location map showing Alternative N3R through the city of Watertown is shown on Figure 2.2.4.5. Since this alternative was developed after the first Public Information Meeting (PIM) in June 1999, it was shown to the general public at the second PIM in January 2000 as Alternative N3R, and was shown and discussed at later Study Committee meetings in the north segment.

This alternative would have followed the same alignment described above in Alternative 3D (N3) from Baneck Lane to the Rock River in Watertown. At the Rock River bridge the alignment would have turned northwest, crossing the Canadian Pacific Railroad and the Union Pacific Railroad. The corridor would have then turned north and paralleled the Union Pacific Railroad before rejoining the existing alignment near Spaulding Street. At-grade signalized intersections along the relocated route were proposed at CTH A, STH 19, and existing STH 26 near Spaulding Street. North of the STH 26/STH 16 interchange this alternative would have followed the same alignment as Alternative 3D (N3).

This alternative was studied in approximately the same level of detail as the alternatives retained for detailed study in order to compare its associated impacts to other detailed study alternatives, and to provide as much time as possible for study committee members and the public to review and comment on the alternative. Impacts for the rail corridor Alternative N3R are shown on Table 2.2.4.5. This alternative would also be subject to Section 4(f) historic considerations due to historic resources along the rail corridor.

Alternative N3R would have maximized the use of the existing corridor, resulting in low impacts to farmland and the natural environment near Watertown. It would have avoided many of the historic resources that were adjacent to the existing STH 26 alignment between Bernard Street and Spaulding Street, but would have had an adverse impact on historic resources along the rail corridor.

This alternative was not carried forward as one of the alternatives for detailed study, even though it was studied in approximately the same level of detail as other detailed study alternatives, because it would have had a number of adverse impacts within the City of Watertown and because it would not have met project purpose and need requirements in a number of ways as described below.

- **Truck Volumes:** As a designated truck route, STH 26 also needs to be improved as an efficient and safe truck route. Reducing truck volumes within the City of Watertown has been an important concern to city and town residents throughout the study. Between 3,900 and 4,700 daily trucks are forecasted along STH 26 within the City of Watertown by the year 2028. Low operating speeds and increased travel time would have resulted in increased pollution and fuel consumption. This alternative does not reduce truck traffic in the city and does not meet the project purpose and need as an efficient and safe state truck route

- **Operating Speeds:** Given the regional importance of STH 26, an alternative that meets the purpose and need for this project must maintain a reasonable average operating speed (~40-mph (65-km/h) urban, ~55-mph (89-km/h) rural). Intersections that remain open for 4-way traffic movements would require a signal for safety and effective operation. A through town rail corridor alternative in Watertown would have required nine signalized intersections. While each individual intersection movement would operate at LOS D or better, it would not have been possible to provide progressive

traffic flow between all the signals for STH 26 through traffic. At CTH A and STH 19 intersections most STH 26 traffic would have had to stop, thereby reducing the average operating speed through town to about 25-mph (40-km/h), with operating speeds on some segments as low as 18-mph (29-km/h).

The concept of removing signals to increase operating speed along the route was examined, but found to offer minimal improvement in overall operating speed. The intersections at CTH A and STH 19 are major high-volume routes and major access points to the community, and need to remain in order to provide important access to the community. As described above, the operating speed in the areas of these two intersections is about 18 mph (29 km/h). Safe access to and from STH 26 can only be accomplished at signalized intersections due to the high traffic volumes. Removal of a signal from any location to reduce the number of signals also would remove that location as a local access point, and would force traffic wanting community access to travel to the next signalized intersection. The additional turning movement traffic forced to disperse to another signalized intersection would have potential to overload the capacity of that intersection causing further delays. There would have been no significant time benefit associated with a reduction in the number of traffic signalized intersections. Although this alternative may be effective as a local arterial, it does not meet the purpose and need as an efficient regional facility.

- **Travel Time:** The rail corridor alternative would have had an estimated 300,000 hours per year increased travel time compared to a near west bypass alternative. This additional travel time is caused by the lower posted speed of 45-mph (73-km/h) and the inability of drivers to travel at the posted speed due to congestion and traffic signals as discussed above. Speed changes and delays associated with congestion, signal spacing, or signal timing would have increased vehicle operating costs for fuel and oil consumption, tire wear, and maintenance. There would also have been increased air pollution due to the stopping, starting, and idling of vehicles compared to the free flow on the bypass alternatives. The cost of the increased travel time on the railroad corridor would have been $12,000 per day or $4.4 million a year, not including the additional cost of vehicle operation. This alternative does not meet the project purpose and need of reducing congestion and travel time.

- **Crashes:** High traffic and truck volumes are a safety concern to motorists and pedestrians within the city. The crash rate on STH 26 within the City of Watertown greatly exceeded the statewide average crash rate from 1994 to 1998. As traffic volumes continue to increase, the potential for crashes increases. Pedestrian crossings and riding bicycles would become increasingly dangerous in downtown areas where pedestrian and bike volumes are typically the highest. With STH 26 moved to a bypass alignment, the predicted combined total number of crashes on the existing STH 26 alignment and the bypass route would be 30 to 35 crashes a year less, 25 percent less, than the predicted combined total number of crashes on the existing STH 26 and rail corridor alignments. In addition, there would be a decrease of 10 to 15 crashes per year on STH 19 if STH 19 was relocated from Main Street to the bypass. This alternative does not meet the project purpose and need of enhancing highway safety on STH 26.

- **Community Circulation:** A major route with high traffic volumes through the center of Watertown is disruptive to the internal circulation of the community. With the reduction of cross streets along STH 26 that would have occurred with this alternative, traffic would have been required to circulate to signalized intersections to cross the route, thereby resulting in increased delays on side streets due to the concentration of vehicles at signalized intersections. The large residential area north of Main Street and west of the railroad corridor would have been effectively left with only one entrance with the closing of Elm Street to either all turns or all left turns at the railroad corridor. It would have been

more difficult to reach Church Street and STH 26 from West Street since West Street would no longer have directly connected to Church Street or STH 26. The combination of increased intersection delays at STH 26 and a more limited street system could have resulted in increased emergency service times to certain areas of the city. The rail corridor alternative would have used some of the limited amount of land that is owned by Maranatha College in an area that is planned for future expansion of their facility, and would have caused disruption to students traveling to and from the college in nearby housing. Alternative 3D (N3R) does not meet the project purpose and need of accommodating the local access transportation needs of the community.

Below are other issues raised by the through-town alternative:

- **Historic Properties:** Along the rail corridor alternative there are five sites either eligible or potentially eligible for the NRHP. These include the Maranatha Baptist Bible Church which has two contributing buildings and four noncontributing buildings, the Chicago & Northwestern Railroad Depot, an industrial building on Union Street, and Slight's Standard Oil Filling Station near Kiln Road. All of these historic properties would be adversely impacted with the construction of a rail corridor through town alternative.

- **Local Support:** Through town alternatives have been discussed many times with local communities at study committee and public information meetings. On May 18, 2000, the Town of Watertown expressed support for the rail corridor through town alternative (see Appendix A). The City of Watertown does not support the rail corridor through town alternative (see Appendix A). Minimum support has been shown by the way of verbal and written comments received for a through town alternative.

- **Relocations:** This alternative would require an estimated total of 85 relocations of which approximately 61 are within the City of Watertown causing significant disruption of the community. The majority of the business relocations are along the rail corridor. A row of 4-unit apartment complexes located along existing STH 26 on the north side of Watertown accounts for 32 of the residential relocations. The remaining residential relocations are along the rail corridor and south and north of Watertown.

- **Land Conversions:** The rail corridor has substantially less land converted to right-of-way because the route primarily follows the existing STH 26 corridor. This alternative requires approximately half the amount of farmland, wetland, and total land converted to right-of-way as compared to alternatives N1 and N2.

- **Environmental Issues:** Seven acres (2.8 ha) of wetland are impacted by this alternative as compared to 17 acres (6.9 ha) for N1 and 22 acres (8.9 ha) for N2. The rail corridor through town alternative would require a new four lane Rock River crossing in the City of Watertown and a Section 404 permit for discharge of dredged or fill material, as would alternatives N1 and N2.

- **Noise:** Traffic noise, trucks in particular, would impact properties along STH 26 and along the rail corridor within the City of Watertown. In urban areas where traffic and pedestrian access is important to businesses and homes along the route, a noise barrier would not be practical or effective. This alternative would not reduce traffic noise within the city.

- **Access:** Driveways and side street access disrupt the flow of traffic and present a major safety concern on high volume routes. Crossing or entering traffic on STH 26 at uncontrolled intersections

becomes increasingly dangerous as traffic volumes increase on STH 26. In order to provide a safe and efficient transportation system, access at driveways and side streets would be restricted to either right-in/right-out turns or eliminated completely. Traffic would be routed to signalized intersections to allow safer movements for left-turns and crossing traffic. This alternative would reduce the access to residential and commercial properties along the route.

- **Costs:** Although the estimated construction cost of this alternative is lower than the bypass alternatives, the higher real estate cost of this alternative offsets this advantage. The rail corridor alternative is estimated to cost $75 million as compared to Alternatives N1 and N2 costing $74 million and $79 million, respectively. Business and residential relocation costs are not included in the above estimates.

2.2.4.6 Alternative 3E (Carried Forward as Detailed Study Alternative N2) (see Exhibit 7)

Alternative 3E includes a near east Watertown bypass corridor along the existing STH 16 bypass corridor in the northeast portion of the city. The bypass corridor is within the approved Watertown urban service area boundaries. From the south limits of the North Segment, this alternative follows the existing alignment of STH 26 with the addition of two lanes and a median to the existing roadway until it heads off on relocation. The alternative leaves the existing alignment heading easterly about 0.5 miles (0.8 km) south of Watertown near Turf Drive. It joins STH 16 near Gopher Hill Road and then follows the existing STH 16 corridor to the northwest, returning to the existing STH 26 alignment near the north corporate limits of Watertown at the existing STH 26/STH 16 interchange. Proposed interchanges are a diamond at Airport Road to the south, a trumpet at STH 16 to the east, half-diamonds at Oak Hill Road and at CTH R along existing STH 16, and a trumpet at the existing STH 26/STH 16 interchange to the north of Watertown. Existing at-grade intersections along STH 16 would no longer be permitted. A structure over the Rock River would be required.

From the north corporate limits of Watertown to the northern project terminus at STH 60-East, this alternative follows the existing STH 26 alignment with the addition of two lanes and a median to the existing roadway.

Alternative 3E would minimize impacts to the natural environment by connecting to the STH 16 bypass corridor. This alternative would have the fewest farmland impacts of all the bypass alternatives. South of Watertown, this alternative would offer an efficient route to the Watertown hospital located along the STH 16 bypass. This alternative would not serve truck traffic generated from the west side industrial park. The addition of two lanes to the STH 16 bypass would be required to handle the increased traffic volumes. This alternative met the purpose and need requirements for this project and was carried forward for detailed study as Alternative N2.

2.2.4.7 Alternative 3F (Dismissed From Further Consideration)

Alternative 3F included an east Watertown bypass corridor. It followed the Alternative 3E alignment from the south limits of the North Segment to CTH E. The alternative then curved farther east, crossing STH 16 near Gopher Hill Road, and then headed north returning to the existing STH 26 alignment about 2.6 miles (4.2 km) north of Watertown near Second Street. Interchanges were proposed at Airport Road to the south, at STH 16 to the east, and at Second Street to the north of Watertown. After joining the existing alignment north of Watertown, this alternative would have continued north, adding two lanes and a median to the existing roadway until the northern project terminus at STH 60-East.

Alternative 3F had the greatest wetland impacts (approximately 85 acres; 34 ha) of all bypass alternatives. The north interchange would not have served the City of Watertown. This alternative impacts approximately 190 more acres (77 ha) of farmland than would Alternative 3E. Other preliminary alternatives existed that met the purpose and need requirements for this project with less environmental disruptions. This alternative was dismissed from further consideration.

2.2.4.8 Alternative 3G (Dismissed From Further Consideration)

Alternative 3G included a far east Watertown bypass corridor. From the south limits of the North Segment, this alternative would have followed the existing STH 26 alignment with the addition of two lanes and a median to the existing roadway. This alternative would have left the existing alignment heading easterly about 1.7 miles (2.7 km) south of Watertown near Ebeneezer Drive. It would have crossed STH 16 approximately 3,000 feet (915 m) east of the Rock River and returned to the existing STH 26 alignment about 3.6 miles (5.8 km) north of Watertown near CTH JM. Interchanges were proposed near Ebeneezer Drive to the south, at STH 16 to the east, and at CTH JM to the north of Watertown. From there, this alternative would have continued north, adding two lanes and a median to the existing roadway until the northern project terminus at STH 60-East.

Alternative 3G would have had severe wetland and floodplain impacts. Compared to Alternative 3E, this alternative would have impacted approximately 270 more acres (109 ha) of farmland and was estimated to cost $11 million more. The north and south interchanges would not have served the City of Watertown and their industrial parks. Alternative 3G had little or no local support. Due to the length of route on relocation, local jurisdictions would have incurred increased maintenance costs as a significant length of existing STH 26 would become a local road. Other preliminary alternatives existed that met the purpose and need requirements for this project with less environmental disruptions. This alternative was dismissed from further consideration.

2.2.4.9 Alternative 3H (Dismissed From Further Consideration)

Alternative 3H included a far east Watertown bypass corridor. This alternative would have followed the Alternative 3G alignment from the south limits of the North Segment until the Canadian Pacific Railroad tracks east of Watertown. The alternative would have then continued farther east, crossing STH 16 approximately 4,000 feet (1,220 m) east of the Rock River, and then headed north, returning to the existing STH 26 alignment about 3.6 miles (5.8 km) north of Watertown near CTH JM. From there, this alternative would have continued north, adding two lanes and a median to the existing roadway until the northern project terminus at STH 60-East.

This alternative would have impacted the greatest amount of farmland, approximately 746 acres (302 ha). Impacts to wetlands and floodplains were also high along this corridor. Alternative 3H was estimated to cost $14 million more than Alternative 3E. This route had the longest overall length and required approximately 822 acres (333 ha) of right-of-way acquisition. Due to the length of route on relocation, local jurisdictions would have incurred increased maintenance costs, as a significant length of existing STH 26 would become a local road. This alternative had little or no local support. Other preliminary alternatives existed that met the purpose and need requirements for this project with less environmental disruptions. This alternative was dismissed from further consideration.

2.3 ALTERNATIVES RETAINED FOR DETAILED STUDY

Eight improvement alternatives plus a No-Build alternative were carried forward for detailed study. The eight detailed study improvement alternatives are generally refinements, variations, or combinations of the preliminary alternatives. However, a different naming convention was used to avoid confusion between preliminary alternatives and detailed study alternatives. Table 2.1.4 shows the relationship between the preliminary alternatives and the detailed study alternatives.

Through-town alternatives for the cities of Milton, Jefferson, and Watertown were studied in greater detail than other preliminary alternatives. They were studied on a continuous basis until after the second public information meetings in January 2000. These alternatives were studied in more detail than other preliminary alternatives that were dismissed to study the associated impacts in more detail and to provide a longer time for the public to review and comment on the alternatives. The through-town alternatives were studied and presented to study committees and at public information meetings including the January 2000 public information meetings. The more detailed analysis conducted for the through-town alternatives in Milton (Alternative 1D, later renamed S1), Jefferson (Alternative 2E, later renamed C5), and Watertown (Alternative 3D, later renamed N3) resulted in the conclusion that these alternatives failed to meet the purpose and need requirements for this project, and had a number of impacts within those communities that were adverse. In addition to not meeting the purpose and need requirements for this project, each of the through-town alternatives would have been subjected to Section 4(f) considerations due to the extensive historic resources within each community that would have been adversely impacted. For these reasons, the through-town alternatives (S1, C5, and N3) were dismissed from further consideration, and were not carried forward as a detailed study alternative. These alternatives are described in more detail in section 2.2.1.4. Preliminary Alternatives. Impacts for the through town alternatives are shown on Table 2.2.4.5.

In Watertown, a second through-town alternative that partially follows a railroad corridor was developed based on discussions with a Study Committee member at a Town of Watertown meeting in December 1999. This alternative is described in more detail in section 2.2.4.5 Alternative N3R. Since this alternative was developed after the first public information meeting in June 1999, it was shown to the general public at the second public information meeting in January 2000 as Alternative N3R, and was also shown and discussed at the later Study Committee meetings in the north segment. This alternative was studied in approximately the same level of detail as the alternatives retained for detailed study in order to compare its associated impacts to other detailed study alternatives, and to provide a longer time for the public to review and comment on the alternative. The detailed analysis conducted for this rail corridor through-town alternative, however, resulted in the conclusion that the alternative failed to meet the purpose and need requirements for this project. Impacts for Alternative N3R are shown on Table 2.2.4.5. This alternative would also have been subjected to Section 4(f) considerations due to historic resources along the rail line. Because it failed to meet the purpose and need requirements for this project, the rail corridor through-town alternative was ultimately not retained as a detailed study alternative even though it was studied in approximately the same level of detail as the alternatives retained for detailed study.

2.3.1 Description of No-Build Alternative

Under the No-Build alternative, improvements to the STH 26 corridor would primarily consist of maintenance activities or spot improvements that attempt to maintain current service levels. Generally, the rural section of roadways, including the Ft. Atkinson bypass, would remain a two-lane rural roadway with no change in access. The exception to this is the rural section between Janesville and Milton, which

was reconstructed as a four-lane divided rural highway in 1999. Urban sections of roadway in Milton, Jefferson, and Watertown (north of STH 19) would remain as two-lane urban roadways with some parking and turn lanes. The urban section of Johnson Creek between CTH Y and Baneck Lane is programmed for reconstruction as a four-lane divided roadway in 2001-2002, and the urban section of Watertown south of STH 19 is programmed for reconstruction as a four-lane urban roadway in 2002. There would be minimal change in access in any of the urban communities.

According to the WisDOT's facilities development guidelines, a rural 2-lane roadway generally falls below LOS "C" when traffic volumes exceed 8,200 ADT on facilities with 12-foot (3.6 meters) wide driving lanes and 10 percent trucks. Currently, 90 percent of the rural segments within the 48-mile (77-km) study corridor have traffic volumes exceeding 8,200 ADT, and all have greater than 9 percent truck volumes. By 2028, almost all rural segments are projected to exceed the 8,200 ADT threshold by two to four times.

WisDOT's facilities development guidelines states that a 2-lane urban roadway falls below LOS "C" at 13,000 ADT on facilities with 11-foot (3.3 meters) wide driving lanes and 5 percent trucks. Currently, both Jefferson and Watertown have traffic volumes exceeding 13,000 ADT and truck volumes exceeding 5 percent. By 2008, both Jefferson and Watertown are estimated to have segments in excess of two times the 13,000 ADT threshold. By 2028, all urban segments within the study corridor are estimated to exceed the 13,000 ADT threshold, most by two to three times.

As a result of the high traffic volumes, capacity of the existing roadway can not achieve an acceptable level of service. The majority of segments will operate at LOS "E" or LOS "F" in the design year 2028, which is characterized by long backups and delay causing driver frustration and forced vehicle maneuvers. The STH 26 corridor will not operate efficiently if no improvements are made to the existing roadway. Traffic will likely divert to local road systems in the cities and townships resulting in increased safety problems in the corridor and adjacent local road systems.

A high number of existing access points, particularly in urban areas, along with the high traffic and truck volumes, contribute to crash potential. From 1994 to 1998, the STH 26 corridor had a number of segments with higher than average crash rates (see Section 1.3.5). It is likely that crash frequency will increase if no improvements are made to the existing roadway.

While the No-Build alternative would include spot improvements, these type and magnitude of improvements will not be able to keep pace with the increasing traffic demands placed on this highway. Level of service will continue to deteriorate as traffic volumes grow, and the number of crashes will continue to remain high. Because of the mix of local and through traffic in urban communities of Milton, Jefferson, and Watertown, traffic delays and back-ups would continue to occur at signalized intersections and side roads, particularly during peak hours. Relatively unimpeded traffic flow with an operating speed of 55-65 mph (89-105 km/h) in rural areas and 40-mph (65-km/h) in urban areas would not be achievable with a No Build alternative given the high traffic volumes and high number of access points.

Existing STH 26 within the City of Jefferson was reconstructed in 1999. This urban section operates as a two-lane roadway with 12-foot (3.6 m) driving lanes, with some sections having additional width to accommodate turn lanes and on-street parking. This recent reconstruction represents the extent of improvement within the community that can be accomplished without adversely impacting side road and driveway accesses, historic resources, business and residential relocations, and community circulation patterns.

The existing roadways in the urban communities would become even more congested than today. This congestion would cause hardship to the local mobility, limiting the public's access to businesses, schools, and other parts of the community. Because STH 26 is the major north-south route in Jefferson and Watertown, police, fire, ambulance and school bus service, increased congestion in these areas would hinder these services. Increasing traffic volumes passing through urban areas on a regional facility such as STH 26 can impair residential neighborhoods and business districts, historic properties and community facilities and require the removal of on-street parking. As development continues to grow in and around the corridor, an unimproved two-lane roadway in Milton and Jefferson and the proposed 4-lane plan in Watertown would not be able to accommodate the resulting new development.

The No-Build Alternative, while having fewer environmental impacts such as land acquisition and relocations, would not be consistent with the *Corridors 2020* plan and its intended highway function as a route of national, state, regional and local importance. STH 26 would not function effectively as a regional highway, and regional traffic would increasingly use less congested local and county roads. The utility of STH 26 for transporting goods to regional, statewide, and national destinations would decline. For these reasons, the No-Build Alternative would not meet the purpose and need requirements of this project. It is carried forward as a detailed study alternative to serve as a baseline for comparison of Build Alternatives and for evaluation of their environmental impacts.

2.3.2 Description of Build Alternatives

Each of the eight detailed study improvement alternatives evaluated in this EIS consists of upgrading the existing two-lane roadway to a four-lane divided rural highway. The general concept is to utilize the existing highway corridor to the extent practical, with bypasses of communities where necessary to maintain constant highway speed and to avoid impacts to historic sites and excessive relocations.

Freeway access control standards (access allowed only at interchanges) would be implemented along the bypass portions of the route. It is further proposed for the rural portions of STH 26 between the bypasses that expressway standards be applied. This would mean that public road at-grade intersections and private driveways would be allowed at safe locations that meet spacing guidelines. It would be the goal of WisDOT to minimize the number of at-grade public intersections and private driveways. This would be accomplished by consolidation, grade separation of certain public roads from STH 26, or constructing an interchange at selected busy intersections. Once a preferred alternative is selected, and before final roadway design is undertaken, WisDOT proposes to work with local units of government and adjacent property owners to determine what access modifications would need to be made.

The location of the rural highway alignment will shift from one side of the existing roadway to the other in order to minimize impacts through the already occupied corridor. This type of alignment was selected as the best means to avoid or minimize adverse effects to natural resources, such as wetlands, woodlands, and farmlands, as well as minimize effects related to property severances, relocations, and conversion of other lands for highway purposes.

The location of the highway alignment in bypass areas was generally closer in to a community and within approved urban service area boundaries rather than farther out to avoid or minimize adverse effects to natural resources and farmlands. Efforts were made to minimize effects related to property severances, relocations, and conversion of lands for highway purposes.

WisDOT's facilities development guidelines indicate that capacity improvements for a two-lane rural arterial roadway should be considered when the Average Daily Traffic (ADT) reaches 8,200 vehicles. At

this volume, a two-lane highway is considered a high-density highway with stable flow and operating at a LOS "C." However, only small increases in traffic volume will cause operational delays. Currently, 90 percent of the rural segments within the 48-mile (77-km) study corridor have traffic volumes exceeding 8,200 ADT. By 2028, almost all rural segments are projected to exceed the 8,200 ADT threshold by two to four times. The eight improvement alternatives carried forward for detailed study will provide the needed capacity and level of service for the corridor's current and projected traffic volumes.

The improvement alternatives will reduce the number of crashes along STH 26, with the most substantial reduction of crashes being in the urban sections. Both expressway and freeway access control standards will reduce the number of traffic conflicts and potential for crashes. The separation of traffic from two to four lanes will increase gap distances and provide more passing opportunities, which will reduce intersection and driveway entrance related crashes, as well as head on, rear end, and angle crashes and other variable speed crashes.

A four-lane rural divided roadway with expressway and freeway access control standards for the improvement alternatives will permit relatively unimpeded traffic flow of 55-65 mph (89-105 km/h) along the majority of the STH 26 corridor. The exceptions would be the areas of STH 26 that approach IH 90 at Janesville and IH 94 at Johnson Creek. In these areas it is reasonable to expect a slow down in traffic operations as a major STH arterial connects to a major Interstate Highway.

The improvement alternatives provide a functionally continuous facility throughout the entire project length. They also are consistent with the *Corridors 2020* plan, which designates STH 26 as a Connector Route. STH 26 would function effectively as a regional highway for transporting goods to regional, statewide, and national destinations.

To a large extent, the improvement alternatives make use of the existing right-of-way, which will minimize the disturbances to adjacent properties and minimize the number of farmland severances and other property severances. By relieving congestion and providing interchange access at high volume crossroads, area accessibility and safety will be improved.

A disadvantage of the improvement alternatives will be the effects on the natural and human environment that result from any major project of this size. Farmland, business property, and residential property will be acquired for highway purposes. Although the additional right-of-way required would be minimized, a number of homes and businesses along STH 26 will need to be relocated. Another disadvantage of these alternatives will be the cost required to construct a project of this size.

With the construction of bypasses, the existing STH 26 route in Milton, Jefferson, and Watertown will become a local road and will need minor spot improvements to have adequate capacity to carry the projected remaining traffic volumes at a minimum LOS "D" in 2028.

In summary, the eight improvement alternatives will meet the purpose and need requirements of this project while minimizing impacts to the natural and human environment through careful design. Each will address capacity and level of service, problems associated with safety, and will provide system continuity and roadway function consistent with a route of national, state, regional and local importance.

The following sections discuss each of the improvement alternatives in terms of the corridor's three study segments.

2.3.2.1 South Segment (Segment 1)

The south segment detailed study alternatives are described below and shown in Figure 2.3.2.1 and Exhibit 5.

2.3.2.1.1 Alternative S2

Alternative S2 generally follows the existing highway but with a relocated alignment crossing through the City of Milton that was developed to avoid impacts to several historic properties, South Goodrich Park, North Goodrich Park, and East Elementary School associated with the existing corridor. From Janesville, this alternative would follow the existing rural 4-lane divided roadway northeast to about Town Line Road. The corridor would then continue northeast on new alignment and curve to intersect STH 59-East approximately 3,500 feet (1,070 m) east of existing STH 26, the Milton House and other historic sites, the two parks, and the elementary school. North of STH 59-East, the alignment would curve northwest and cross the existing STH 26 corridor about 1,500 feet (460 m) north of STH 59-West, avoiding two golf courses and residential subdivisions. A grade separation crossing of existing STH 26 is proposed to allow the existing corridor to remain in place, providing local access to numerous residential properties and the two golf courses located north and east of the city. This alternative would then curve northerly, remaining about 1,300 feet (400 m) west of the existing STH 26 corridor until rejoining the corridor near John Paul Road. Diamond interchanges are proposed southeast of the city at a relocation of STH 59-East to provide better access between Janesville and Whitewater, and north of the city at a proposed extension of Bowers Lake Road. Grade separation structures are proposed for Townline Road, CTH M, STH 59-East, the Wisconsin and Southern Railroad tracks, Storrs Lake Road, and existing STH 26.

Alternative S2 would continue northerly as a divided four-lane rural facility by adding two additional lanes and a median to the existing roadway between John Paul Road and the Fort Atkinson bypass. From north of Milton to CTH N, the new lanes for the highway would be constructed west of the existing lanes to minimize impacts to residential and farm properties. A diamond interchange requiring a structure crossing of Otter Creek is proposed at the intersection of STH 26 and CTH N, because this intersection has been identified as having a high incidence of crashes. North of CTH N, new lanes would be added to each side of the existing centerline to limit impacts to an existing wetland along the eastern side of STH 26, and a recreational trail along the western side. North of County Line Road, the majority of the new lanes would be constructed east of the highway to allow a county recreation trail to remain within an old railroad right-of-way adjacent to STH 26. At-grade intersections are proposed for Eagle Street, Klug Road, John Paul Road, County Line Road, Hamer Lane and Vickerman Road. CTH NN would be closed to STH 26. Grade separation structures are proposed at Pond Road and at Old Highway 26 just south of the Fort Atkinson bypass.

2.3.2.1.2 Alternative S3

Alternative S3 generally follows the existing highway but with a near east Milton bypass alignment that was developed to direct STH 26 along a narrow corridor between the city and the Storrs Lake Wildlife Area. From Janesville to STH 59-East this alternative would follow the same alignment as alternative S2. North of STH 59-East this alternative would continue north on new alignment and remain approximately 3,500 feet (1,070 m) east of existing STH 26, avoiding the Storrs Lake Wildlife Area, two golf courses, and one of two residential subdivisions. The alignment passes through one residential subdivision. This alternative would rejoin the existing alignment about 1.5 miles (2.4 km) north of Milton near John Paul Road. A diamond interchange is proposed at a realignment of STH 59-East and a trumpet interchange is proposed north of Klug Road at a realignment of STH 26 with the bypass alternative. Grade separation

structures are proposed at Townline Road, CTH M, STH 59-East, the Wisconsin and Southern Railroad tracks, Storrs Lake Road, Bowers Lake Road, and Klug Road.

From John Paul Road to the Fort Atkinson bypass, Alternative S3 would continue northerly as a divided four-lane rural facility by adding two additional lanes and a median to the existing roadway, and would follow the same alignment as described in Alternative S2.

2.3.2.2 Central Segment (Segment 2)

The central segment detailed study alternatives are described below and shown in Figure 2.3.2.2 and Exhibit 6.

2.3.2.2.1 Alternative C1

Alternative C1 includes a west Jefferson bypass corridor. From the south limits of the Central Segment, this alternative would follow the alignment of the Fort Atkinson Bypass with the addition of two lanes and a median within the existing right-of-way. Existing interchanges at Business 26, STH 106, and USH 12 would remain. At-grade intersections at Hoard Road and Banker Road would be converted to grade separation structures.

The alternative would leave the existing alignment about 2.3-miles (3.6-km) south of Jefferson at Business 26, then parallel the Union Pacific Railroad corridor on the west before heading northwest. A proposed trumpet interchange at this location would provide access to and from the south side of Jefferson. The route would continue northwest with grade separation structures at CTH W and CTH J and a diamond interchange at USH 18 near STH 89-South. STH 89-South between USH 18 and Ft. Atkinson would run concurrent with Alternative C1, and existing STH 89-South would revert to a county highway. North of USH 18, the corridor would turn northeast with structures crossing the Crawfish River, Martin Road, and Popp Road. The alignment would then head due east with a grade separation structure at CTH N and a bridge over the Rock River. The alignment would curve north before joining the existing alignment north of Jahn Lane. A diamond interchange would be located at a realignment of Junction Road with STH 26. Grade separation structures would be located at Watertown Road, STH 26, the Union Pacific Railroad tracks, and Jahn Lane.

After joining the existing alignment north of Jefferson, this alternative would continue north, with four lanes and a median centered along the existing alignment before matching the proposed four-lane improvement at Johnson Creek near CTH Y. At-grade intersections are proposed at Biederman Drive, Jefferson Road, the Union Pacific Railroad tracks, and CTH Y. Frontage roads would be required along STH 26 to allow access to the highway at Biederman and Jefferson Roads.

2.3.2.2.2 Alternative C2

Alternative C2 includes a near west Jefferson bypass corridor that utilizes more of the existing STH 26 corridor alignment between Fort Atkinson and Jefferson. From the south limits of the Central Segment, this alternative would follow the alignment of the Fort Atkinson Bypass with the addition of two lanes and a median within the existing right-of-way. Existing interchanges at Business 26, STH 106, and USH 12 would remain. At-grade intersections at Hoard Road and Banker Road would be converted to grade separation structures. The alignment would then follow existing STH 26 between Fort Atkinson and Jefferson with the addition of two lanes and a median east of the existing roadway.

This alternative would leave the existing alignment about 1.5-miles (2.4-km) south of Jefferson. It would then parallel existing STH 26 before heading west and crossing over the Union Pacific Railroad tracks about 0.8-miles (1.3-km) south of Jefferson. A proposed trumpet interchange at this location would provide access to and from the south side of Jefferson. Grade separations would be provided over STH 26 and the railroad tracks. Realignment of STH 26 to the new interchange would be required. Grade separation structures are proposed at CTH W and CTH J, with the alignment heading due north after crossing CTH J. A diamond interchange is proposed at USH 18 approximately 0.5-miles (0.8-km) east of STH 89-South. STH 89-South between USH 18 and Ft. Atkinson would run concurrent with Alternative C2, and existing STH 89-South would revert to a county highway. The alignment would then turn northeast near the crossing of the Crawfish River. Grade separation structures are proposed at Popp Road and CTH N. The route would then cross the Rock River and turn north before joining the existing STH 26 alignment north of Jahn Lane. A diamond interchange is proposed at a realignment of Junction Road with STH 26. Grade separation structures would be located at Watertown Road, STH 26, Union Pacific Railroad tracks, and Jahn Lane.

After joining the existing alignment north of Jefferson, this alternative would continue north with four lanes and a median centered along the existing alignment as described in Alternative C1.

At the request of a study committee member, two modifications of Alternative C2 were studied which alters the location of the crossing of USH 18 and the Crawfish River. The modifications are limited to the bypass alignment west of the City of Jefferson approximately one mile south and north of USH 18. Beyond these limits, both modifications would follow the same alignment as Alternative C2. The first modification, referred to as C2(a), includes an alignment that crosses USH 18 approximately 1,000 feet (305 m) east of Alternative C2 and approximately 1,100 feet (335 m) west of the Crawfish River. The second modification, referred to as C2(b), includes an alignment that crosses USH 18 approximately 2,400 feet (730 m) east of Alternative C2 and approximately 400 feet (120 m) east of the Crawfish River. See Exhibit 6 for details of the modifications.

2.3.2.2.3 Alternative C3

Alternative C3 includes a near east Jefferson bypass corridor. From the south limits of the Central Segment, this alternative would follow the alignment of the Fort Atkinson Bypass with the addition of two lanes and a median within the existing right-of-way. Existing interchanges at Business 26, STH 106, and USH 12 would remain. At-grade intersections at Hoard Road and Banker Road would be converted to grade separation structures. The alignment would follow existing STH 26 with the addition of two lanes and a median east of the existing roadway between Fort Atkinson and Jefferson.

The alternative would leave the existing alignment 0.8-miles (1.3-km) south of Jefferson. A proposed trumpet interchange at this location would provide access to and from the south side of Jefferson. Grade separation structures are proposed at CTH K, a crossing of the Rock River, CTH N, and Vogel Lane. Heading east and north, the alternative would cross USH 18 about 1,000 feet (305 m) west of CTH Y. A half cloverleaf interchange is proposed at USH 18 with all ramps north of USH 18 in order to provide safer pedestrian access for St. Coletta residents along the south side of USH 18. The alignment would then head northwest with grade separation structures at Dewey Road and the Union Pacific Railroad. A diamond interchange is proposed at a realignment of Junction Road with existing STH 26. The route would return to the existing STH 26 alignment north of Jefferson near Jahn Lane with a grade separation structure at the Union Pacific Railroad tracks. Jahn Lane would be the first at-grade intersection with STH 26.

After joining the existing alignment north of Jefferson, this alternative would continue north, adding two lanes and a median to the existing roadway following the same alignment as described in Alternative C1.

2.3.2.2.4 Alternative C4

Alternative C4 includes a far east Jefferson bypass corridor that extends northerly on relocation along the CTH Y corridor. From the south limits of the Central Segment to the southeast corner of Jefferson, this alternative would follow the same alignment as Alternative C3. From this point, Alternative C4 would continue northeasterly, crossing CTH Y and North Schopen Road with grade separation structures. Farther north, the alternative would cross USH 18 about 0.8-miles (1.3-km) east of CTH Y where a diamond interchange is proposed. Continuing north, the alignment would parallel CTH Y to the east, cross CTH Y south of Junction Road, then parallel CTH Y to the west until it matches the proposed four-lane improvement at Johnson Creek. A diamond interchange is proposed at Junction Road. Grade separation structures are proposed at Town Line Road, CTH Y, and the Union Pacific Railroad tracks. A realignment of existing STH 26 to CTH Y would be required and a grade separation of STH 26 with the proposed bypass would be constructed south of Johnson Creek.

2.3.2.3 North Segment (Segment 3)

The north segment detailed study alternatives are described below and shown in Figure 2.3.2.3 and Exhibit 7.

2.3.2.3.1 Alternative N1

Alternative N1 includes a near west Watertown bypass corridor. From the south limits of the North Segment, this alternative would follow the existing alignment of STH 26 with the addition of two lanes and a median either east or west of the existing roadway. At-grade intersections are proposed at Spruce Drive, Emerald Drive, Zillge Lane, Ebeneezer Drive, and Turf Drive.

The alternative would leave the existing alignment about 0.5-miles (0.8-km) south of Watertown near Turf Drive. A proposed interchange at this location requiring realignment of High Road would provide access to and from the south side of Watertown. The alignment would then head northwest with grade separation structures at the Union Pacific Railroad, CTH Y, a crossing of the Rock River, CTH A, and Horseshoe Road. The route would turn north with a grade separation structure at CTH T (West Street) and the Wisconsin and Southern Railroad tracks, and a diamond interchange at STH 19. The alternative would cross STH 19 approximately 2,000 feet (610 m) east of CTH K, following the western corporate boundary of the City of Watertown, then curve east near the northwest corporate limits, crossing the Canadian Pacific Railroad tracks and Welsh Road before connecting to STH 16. A proposed cloverleaf interchange would provide direct connections for STH 26 and STH 19 to the STH 16 interchange and would offer free-flow movement to STH 16-East. Provimi Road would be realigned to connect with existing STH 26 north of the interchange. The alignment would continue on relocation north of the cloverleaf interchange before joining the existing alignment south of CTH Q.

After joining the existing alignment north of Watertown, this alternative would continue north adding two lanes and a median either east or west of the existing roadway until the northern project terminus at STH 60-East. STH 60-East would be realigned to connect with STH 60-West. A diamond interchange is proposed at STH 26 and the new connection of STH 60-West. A grade separation structure is proposed at the Union Pacific Railroad tracks. At-grade intersections are proposed at CTH Q, Second Street, Five

Mile Road, CTH JM, Clymet Road, Hill Road, Wilson Road, CTH CJ, and CTH J. Frontage roads to maintain access to STH 26 for local properties would be required near CTH Q, CTH JM, and where existing driveways are located closer together than 500 feet (152 m).

2.3.2.3.2 Alternative N2

Alternative N2 includes a near east Watertown bypass corridor that extends along the existing STH 16-bypass corridor in the northeast portion of the city. From the south limits of the North Segment, this alternative would follow the existing alignment of STH 26 with the addition of two lanes and a median either east or west of the existing roadway. At-grade intersections are proposed at Spruce Drive, Emerald Drive, Zillge Lane, Ebeneezer Drive, and Turf Drive.

The alternative would leave the existing alignment and head east about 0.5-miles (0.8-km) south of Watertown near Turf Drive. A proposed trumpet interchange at this location would provide access to and from the south side of Watertown. The alignment would turn northeast with grade separation structures at Airport Road, CTH X, South Road, CTH E, a crossing of the Rock River, Canadian Pacific Railroad tracks, and East Gate Drive. Beryl Road would be realigned to continue the access to CTH X without closing the local road.

The alignment would join STH 16 with a trumpet interchange near Gopher Hill Road and follow the existing STH 16 corridor to the northwest. Proposed interchanges along the existing STH 16 corridor include half-diamonds at Oak Hill Road and at CTH R. A frontage road along the east side of the highway would connect the two half-diamonds. Grade separation structures are proposed at CTH CM, CTH M, Second Street and Water Street. An existing railroad crossing would require expansion to accommodate the extra lanes along STH 16. The alternative would return to the STH 26 alignment near the north corporate limits of Watertown at the existing STH 26/STH 16 interchange. Provimi Road would be realigned to connect with existing STH 26.

After joining the existing alignment north of Watertown, this alternative would continue north adding two lanes and a median either east or west of the existing roadway until the northern project terminus at STH 60-East. STH 60-East would be realigned to connect with STH 60-West. A diamond interchange is proposed at STH 26 and the new connection of STH 60-West. A grade separation structure is proposed at the Union Pacific Railroad tracks. At-grade intersections would be located at Silver Creek Road, Kiln Road, CTH Q, Second Street, Five Mile Road, CTH JM, Clymet Road, Hill Road, Wilson Road, CTH CJ, and CTH J. Frontage Roads to maintain access to STH 26 for local properties would be required near CTH Q, CTH JM, and where existing driveways are located closer together than 500 feet (152 m).

2.3.3 Comparison of Detailed Study Alternatives

The purpose of this subsection is to discuss the major advantages and disadvantages of each alternative within each study segment. Within each segment, similarities between the detailed study alternatives are presented, followed by summaries of each alternative's unique advantages or disadvantages. A detailed description of environmental impacts is provided in Section IV, and these impacts are summarized in Table 2.3.3.

2.3.3.1 South Segment

Detailed study Alternatives S2 and S3 are both slightly over 14-miles (23-km) long, and avoid impacts to several historic properties including the Milton House (a National Historic Landmark), two parks and a

school associated with the existing corridor in Milton. The alternatives would have similar land conversion impacts of total lands (about 345 acres; 140 ha), farmland (about 310 acres; 125 ha), and woodlands (2 acres; 0.8 ha).

These alternatives are virtually identical in their impacts to environmental features, including wetlands, floodplains, historic properties and archaeological potential. They would have similar land use and socioeconomic impacts, with good consistency with land use plans, good servicing of industrial sites, positive economic impacts, and good community access.

For the design year 2028, both alternatives would reduce traffic through Milton by approximately 55 percent north of STH 59 and by about 40 percent south of STH 59. Truck volumes through Milton would be reduced by an estimated 80 to 90 percent.

Both alternatives have similar cost, minimize natural environment impacts, and provide interchange locations that serve the City of Milton and its industrial park well. Both also offer a connection of IH 90 (Janesville) to STH 59-East (Whitewater) without passing through the City of Milton.

Both alternatives would affect the same two designated natural areas at the crossing of Otter Creek near the intersection of STH 26 and CTH N.

2.3.3.1.1 Alternative S2

The alignment would avoid two golf courses and residential subdivisions northeast of Milton, but would have 47 residential relocations (40 apartment residents and 7 single-family residences) as opposed to 11 single-family residences for Alternative S3. The alignment passes through mostly undeveloped land in the City of Milton but would impact land within the City of Milton's urban service area that is planned for future residential development.

Alternatives S2 and S3 would require comparable amounts of existing farmland, but much of the existing agricultural land affected by Alternative S2 is inside Milton's Urban Service Area and crosses through land planned for residential and industrial use. Therefore, Alternative S2 would affect less agricultural land in the long-term.

Under Alternative S2, the north interchange is located at Bowers Lake Road and is within the Urban Service Area of Milton. This location would provide good access for both existing and planned developments on the north side of the city.

2.3.3.1.2 Alternative S3

Alternative S3 would avoid two golf courses, but would have 11 residential relocations in single-family residences. This route would pass close to the Storrs Lake Wildlife Area and would directly impact the Reserve Subdivision, a new residential development northeast of Milton having 52 platted lots, 6 of which have single family houses on them.

Alternative S3 would require more existing farmland outside Milton's Urban Service Area and therefore not currently planned for residential and industrial use. It also includes an interchange located one mile north of Milton near Klug Road that would receive strong market pressure for commercial development, leading to the conversion of additional farmland as an indirect impact. Therefore, Alternative S3 is likely to affect more agricultural land in the long-term.

2.3.3.2 Central Segment

Detailed study Alternatives C1, C2, C3, and C4 range in length from 18.3 to 19.4 miles (29.5 to 31.2 km). They would require similar numbers of residential relocations (ranging from 5 to 13) and business relocations (ranging from 0 to 3). The alternatives also have similar total costs (ranging from $62 million to $66 million), and similar potential for affecting archaeological sites.

All alternatives have interchanges located south of Jefferson and provide good access for commercial and industrial sites at that end of the city. All alternatives have interchanges with STH 18, although Alternative C1 and C4 would be located farther away from the city. All alternatives have interchanges located north of Jefferson near Junction Road and would provide good access for commercial and industrial sites at that end of the city. Alternative C4, while located on Junction Road, would be further away from the city's northside industrial park and would not serve the area as well as the other three alternatives.

Westside Alternatives C1 and C2, and its modifications C2(a) and C2(b), provide transportation benefits that the eastside alternatives do not provide. Traffic flow, and particularly truck traffic, is generally more oriented to USH 18 to the west to Madison and STH 89 to Lake Mills than it is to USH 18 to the east towards Helenville. The west bypass alternatives facilitate this desired westerly traffic flow and allow STH 89 to be moved from its current location on an old county highway route to the new bypass route.

Additionally, the existing and planned land use on the west side of Jefferson has a large commercial and institutional component. A growing commercial area is located along USH 18 east of the Crawfish River. Three schools (high, middle and elementary) are located just east of the Crawfish River. The Jefferson Performing Arts Center with regularly scheduled performances is located at the high school. The County Fairgrounds has over 150 scheduled events throughout the year, some which attract upwards of 40-50,000 daily visitors. These land uses generate substantial daily and special event traffic and truck volumes from outside the City of Jefferson.

Alternatives C2 and C3 are within Jefferson's Urban Service Area and would affect less agricultural land in the future.

All four build alternatives would have the same effects at two designated natural areas located along existing STH 26. These include the STH 26 Rock River crossing along the Fort Atkinson Bypass, where one additional crossing would be required to construct the additional two-lanes of roadway, and the Jefferson Railroad Prairie Natural Area.

Alternatives C1, C2, C3 and C4 all have similar noise impacts. They have identical noise impacts along existing STH 26 (146 residences and 10 businesses). In the area of the Jefferson bypass, Alternatives C1 and C2 would have no impacts, Alternative C3 would impact two residences and one business, and Alternative C4 would impact one business.

In many other respects, these alternatives vary considerably in their impacts as discussed below.

2.3.3.2.1 Alternative C1

Alternative C1 includes a west Jefferson bypass corridor. It has the greatest overall length (19.4 miles; 31-km) and the highest cost ($66 million). It would have the greatest land conversion impacts of total lands (476 acres; 193 ha) and farmland (438 acres; 177 ha). It would have low wetland impacts (24 acres;

9.7 ha) and would not affect any historic properties. In order to reduce impacts to wetlands and floodplains near the Crawfish River, this alternative was developed to include a river crossing farther west of Jefferson. In so doing, the interchange location on USH 18 is also located further west of the city and would not offer as convenient an access to the city as would closer in alternatives (C2, C2a, C2b, and C3). Because the Alternative C1 interchange on USH 18 would not be located within the Crawfish River floodplain, this alternative could encourage more westerly urban development for the city.

Alternative C1 would cross through Jefferson County's County Farm lands, and would have an impact on that particular institutional site. Alternative C1 would use lands that could otherwise be used to develop County facilities or future residential developments. While this land is currently agricultural in nature, with some county facilities located on it, the area is within the urban service area of Jefferson. Since the southern interchange for Jefferson would be located on the county land, Alternative C1 presents an opportunity for controlling development since it is owned and controlled by the county.

Alternative C1 allows existing STH 26 to remain as a local road connecting Jefferson and Fort Atkinson. It would provide a good connection with the West Junction Road area with an interchange on the north side of the City of Jefferson and hence would provide good access to Jefferson's northside industrial park area.

Alternative C1 would require the greatest amount of farmland conversion to highway right-of-way and would generate the most impacts due to farm severance. Some of the land is outside the urban service area and would therefore have a longer-term impact on agricultural lands.

Alternative C1 would not have floodplain impacts. It would result in low impacts to shoreland wetlands and high impacts to natural stream banks of the Crawfish River, and its crossing of the Rock River would result in low impacts to shoreland wetlands and high impacts to natural stream banks. It would have moderately low wetland impacts of about 24 acres (9.7 ha), including about 8 acres (3.2 ha) of medium to high quality floodplain forest. Alternative C1 would have the greatest upland wooded area impacts of 12 acres (4.8 ha), but would not cause habitat fragmentation in any upland wooded tracts. The four alternatives have similar effects on potential habitat for endangered, threatened, or special concern bird, fish, mammals, reptile, and amphibian species. However, Alternative C1 would have less potential for impact to potential habitat for several such plant species.

2.3.3.2.2 Alternative C2

For purposes of this discussion, the two slight modifications of Alternative C2 west of the city of Jefferson, referred to as C2(a) and C2(b), have similar impacts as Alternative C2. Therefore, Alternative C2 will only be discussed throughout the remainder of this topic unless otherwise stated.

Alternative C2 includes a near west Jefferson bypass corridor. It provides interchange locations south, west, and north of the city of Jefferson that serve the city and its industrial parks, and it minimizes impacts to farmland as compared with Alternative C1. This alternative maximizes the use of the existing corridor, but in doing so, does not provide a local road connection between Jefferson and Fort Atkinson. If Alternative C2 were selected as a preferred alternative, the C1 alignment between Ft. Atkinson and Jefferson could be interchanged with the C2 alignment and therefore provide the local road connection between the two communities.

Alternative C2 would provide westside bypass transportation benefits similar to Alternative C1 described above. Alternative C2 has a different alignment location through the Jefferson County Farm Property

southwest of Jefferson than Alternative C1, and would impact more of the county lands that could otherwise be used to develop county facilities or future residential developments. While this land is currently agricultural in nature, with some county facilities located on it, the area is within the urban service area of Jefferson. Since the southern interchange for Jefferson would be located on the county land, Alternative C2 presents an opportunity for controlling development since it is owned and controlled by the county. If Alternative C2 were selected as a preferred alternative, the C1 alignment between Ft. Atkinson and Jefferson could be interchanged with the C2 alignment.

Alternative C2 is about 1,600 feet (490 m) from the Jefferson County Home facility located in the northwest corner of the Jefferson County Farm Property. Alternative modifications C2(a) and C2(b) are about 1,000 feet (300 m) and 400 feet (120 m) respectively from the Jefferson County Home.

Alternative C2, would provide convenient access to the west side and downtown of Jefferson via an interchange with USH 18. These alternatives would provide an interchange location similar to Alternative C1 at Junction Road area, and would provide good access to the northern part of Jefferson including its northside industrial park area. The Alternative C2 interchange at USH 18 would have limited potential for development, because it is situated in a floodplain.

Alternative C2 would have moderately low farmland conversion impacts (360 acres; 145 ha). The farmland to be converted is inside Jefferson's urban service boundary and is therefore planned for future nonagricultural uses. Alternative C2 also includes an interchange at USH 18, but which would be subject to limited commercial development pressure because the interchange area is located within a regulated floodplain.

The corridor passes through a floodplain near the Crawfish River. Alternative C2 would raise the regional base flood elevation on the Crawfish River by approximately 0.08-foot (25-mm). A slight increase (< 0.08-foot; 25-mm) of the regional base flood elevation is expected to propagate upstream to IH 94. No habitable buildings or other structures would be inundated as a result. Minor habitat loss would occur in floodplain wetlands. Alternative C2 would result in medium impacts to shoreland wetlands and high impacts to natural stream banks of the Crawfish River, and its crossing of the Rock River would result in low impacts to shoreland wetlands and high impacts to natural stream banks.

Alternative C2 would have the lowest wetland impacts of about 20 acres (8 ha), including about 8 acres (3.2 ha) of medium to high quality floodplain forest when compared to Alternatives C1, C3, and C4. Alternative C2 would have moderately high upland wooded area impacts of 9 acres (3.6 ha) and would fragment one area of upland wooded habitat.

Alternative C2 would have similar effects on potential habitat for endangered, threatened, or special concern bird, fish, mammals, reptile, and amphibian species as Alternatives C1, C3, and C4.

As described in Section 2.3.2.2.2, two modifications of Alternative C2 were studied which alters the location of the crossing of USH 18 and the Crawfish River. These two modifications, C2(a) and C2(b), result in different impacts as compared to Alternative C2. C2(a) crosses USH 18 west of the Crawfish River and C2(b) crosses USH 18 east of the Crawfish River.

C2(a) results in six acres (2.4 ha) less farmland impacts, four acres (1.6 ha) less wetland impacts, the same number of residential relocations, one additional business relocation, and three less farm severances as compared to Alternative C2. C2(a) has the same impact to the Crawfish River floodplain as

Alternative C2. C2(a) would raise the regional base flood elevation of the Crawfish River by approximately 0.08-foot (25-mm).

C2(b) results in 14 acres (5.7 ha) less farmland impacts, 0.3 acres (0.1 ha) less wetland impacts, five additional residential relocations, two additional business relocations, and four less farm severances as compared to Alternative C2. C2(b) would raise the regional base flood elevation of the Crawfish River by approximately 0.04-foot (15-mm). C2(b) would also require the USH 18 bridge crossing the Crawfish River to be widened for additional lanes near the interchange. This would result in approximately $1,000,000 additional cost as compared to Alternatives C2 and C2(a).

2.3.3.2.3 Alternative C3

Alternative C3 includes a near east Jefferson bypass corridor. It maximizes the use of the existing corridor and requires the lowest amount of right-of-way acquisition (381 acres; 154 ha) of the bypass alternatives.

Alternative C3 passes through and near property owned by St. Coletta of Wisconsin. This alternative would directly impact two group homes and a greenhouse owned and operated by the institution. Alternative C3 would bisect the St. Coletta campus, causing separation of the campus from the community and probable increased and pedestrian safety concerns. St. Coletta has submitted a letter indicating their opposition to Alternative C3 (see Appendix A).

Interchanges are located close to the City of Jefferson and their industrial parks on the south, east, and north sides of the city. Alternative C3 provides a south interchange about the same distance south of the city as does Alternatives C1, C2, and C4, and would not pass through the County Farm property. This interchange would provide good access to the southern part of the city and its industrial sites. Alternative C3 provides convenient access to the east side and downtown Jefferson via an interchange at USH 18 that is close to the east city limits. The interchange at USH 18 would have limited potential for development, because the interchange borders the St. Coletta property. Alternative C3 also provides an interchange at the Junction Road area on the north side of the city, similar to Alternatives C1 and C2. Alternative C3 would provide good access to industrial sites on the northern part of the city of Jefferson.

Alternative C3 would have the lowest farmland conversion impacts (338 acres; 137 ha). The converted farmland is inside Jefferson's urban service area and is planned for future nonagricultural uses, and therefore would affect less agricultural land in the long term.

Alternative C3 would not have floodplain impacts. Its crossing location of the Rock River has low impacts to shoreland wetlands and floodplain areas, but high impacts to natural stream banks. Alternative C3 would impact approximately 30.5 acres (12.3 ha) of low to medium quality wetland. Alternative C3 would have low impacts to upland wooded habitat (2 acres; 0.8 ha). The four alternatives have similar effects on potential habitat for endangered, threatened, or special concern bird, fish, mammals, reptile, and amphibian species. However, Alternative C3 could impact potential habitat for several such plant species.

2.3.3.2.4 Alternative C4

Alternative C4 includes a far east Jefferson bypass corridor that extends northerly on relocation along the CTH Y corridor. Alternative C4 would impact 374 acres (151 ha) of farmland and requires a large amount of right-of-way acquisition (460 acres; 186 ha).

Alternative C4 provides an interchange south of the city at the same location as Alternative C3, and would provide convenient access to the south side of the city and its industrial sites on that end of town. Alternative C4 provides an interchange east of the city on USH 18, however, it is farther east of the Alternative C3 location and would not provide as convenient an access to the city. In addition, traffic circulation under this alternative is not desirable from the east since traffic on USH 18 between the City of Jefferson and the interchange at STH 26 will be routed past the St. Coletta's establishment through a narrow right-of-way section. Alternative C4 also provides an interchange north of the city at Junction Road, however this interchange location is farther east than Alternative C1, C2, or C3, and would not serve the north side industrial park area as well as the other alternatives.

Alternative C4 would not have floodplain impacts. Its crossing location of the Rock River has low impacts to shoreland wetlands and floodplain areas, but high impacts to natural stream banks. Alternative C4 would have the greatest wetland impacts, approximately 54.8 acres (22.2 ha), including 21 acres (8.5 ha) of medium to high quality floodplain forest. Alternative C4 would impact 10.5 acres (4.3 ha) of upland wooded habitat. The four alternatives have similar effects on potential habitat for endangered, threatened, or special concern bird, fish, mammals, reptile, and amphibian species. However, Alternative C4 could impact potential habitat for several such plant species.

2.3.3.3 North Segment

Alternative N1 includes a near west Watertown bypass corridor within the approved Watertown urban service area boundaries. Alternative N2 includes a near east Watertown bypass corridor with a new southeast section connecting with the existing STH 16 bypass corridor in the northeast portion of the city. Both alternatives are likely to have similar impacts on North Segment institutional sites. They would generally improve access to institutional land use by providing relief for traffic on local streets without creating barriers to pedestrian or traffic movement within the City.

Both alternatives would impact existing rural residences in the Town of Watertown on south side of the City of Watertown and would potentially impact planned residential neighborhoods within the City's 20-year urban growth boundary. The two alternatives would require similar numbers of residential and business relocations. Alternative N1 would require 19 residential and 7 business relocations. Alternative N2 would require 24 residential and 5 business relocations.

Both alternatives would probably affect similar numbers of archaeological sites.

Both alternatives would result in impacts to approximately 21 acres (8.5 ha) of wetlands with low to high functional values. Both alternatives will result in medium impacts to shoreland wetlands and natural stream banks at their respective crossings of the Rock River. Neither alternative would have any floodplain impacts. Both alternatives would require a new crossing of the Rock River either southwest or southeast of Watertown. All areas of the Rock River near the crossing locations are designated as containing natural areas.

Both alternatives would impact one known contaminated hazardous material site north of Watertown.

2.3.3.3.1 Alternative N1

Interchanges are located south, west, and north of the City of Watertown and provide good access to residential, commercial, and industrial park sites. This is the only alternative that provides a direct

connection for both STH 26 and STH 19 to the STH 16 interchange and offers free-flow movement to STH 16-East. The connection with the STH 16 bypass north of Watertown provides a distinct traffic system benefit to the area for STH 19 traffic continuing on STH 16 or STH 26 without entering the City of Watertown. West of Watertown, this alternative offers an efficient route to the Watertown hospital located along the STH 16 bypass.

Alternative N1 is more consistent with land use plans for the area than is Alternative N2. This alternative would serve the City's planned industrial expansion area on the west side and would provide good community access without disrupting existing neighborhoods. Alternative N1 improves access to existing and future development, including industrial sites, on the City's west and northwest sides with its interchanges at STH 19 and STH 16.

Alternative N1 would require 767 acres (310 ha) of farmland. It would have the greatest primary agricultural impact on existing farmland. The converted farmland is within the City's urban service area planned for nonagricultural uses, and therefore would affect less agricultural land in the long term. Alternative N1 would have fewer upland wooded area impacts than Alternative N2. It would result in approximately 7 acres (2.8 ha) of upland wooded area impacts with no fragmentation of upland wooded areas. The two alternatives have similar effects on potential habitat for endangered, threatened, or special concern plant, bird, fish, mammals, reptile, and amphibian species.

Alternative N1 would not impact any public recreational lands or NRHP-eligible historic sites and would not be subject to any Section 4(f) considerations. Alternative N1 would have greater residential noise impacts than Alternative N2, with impacts to 186 residences and 10 businesses.

2.3.3.3.2 Alternative N2

The Alternative N2 bypass corridor includes a near east bypass of Watertown that is within the approved urban service area boundaries. It provides an interchange approximately the same distance south of the city of Watertown, and provides good access to commercial and industrial sites in that area. It also provides an interchange with STH 16 although no access would be provided at that location. Two half diamond interchanges would be provided on the east side of Watertown along the existing STH 16 bypass corridor. These half diamond interchanges would provide reasonable access to the east side of Watertown for commercial and residential residents, but would not serve west side industrial park sites.

Alternative N2 would minimize impacts to the natural environment by connecting to the STH 16 bypass corridor. South of Watertown, this alternative would offer an efficient route to the Watertown hospital located along the STH 16 bypass. The addition of two lanes to the STH 16 bypass would be required to handle the increased traffic volumes.

Alternative N2 is less consistent with area land use plans and policies than is Alternative N1. The route provides fewer community access benefits and would not serve the City's planned industrial expansion areas on the west side of the City. Additionally, this alternative does not provide a new connection for STH 19 to STH 16 or STH 26. Therefore, traffic, including trucks, would continue to use the existing STH 19 route through the downtown commercial area of Watertown in order to make a connection to STH 16. The proposed interchange at STH 16 is partially outside of the City's planned urban growth area and would potentially stimulate development outside the City.

Alternative N2 would require 415 acres (168 ha) of farmland. It would affect more farmland outside the City's 20-year urban service area than Alternative N1. The east-side interchange for Alternative N2 could

stimulate loss of farmland due to commercial development outside the City. Alternative N2 would have greater upland wooded area impacts than Alternative N1. It would result in approximately 15.2 acres (5.5 ha) of upland wooded area impacts that would cause habitat fragmentation in five upland wooded areas. The two alternatives have similar effects on potential habitat for endangered, threatened, or special concern plant, bird, fish, mammals, reptile, and amphibian species. The preferred habitat of one such bird species may potentially be impacted by Alternative N2, but not by Alternative N1.

Alternative N2 would not impact any public recreational lands, but would be located in front of Slight's Standard Oil Filling Station, an NRHP-eligible historic site. Land would not be required from the site. Alternative N2 would have fewer residential noise impacts than Alternative N1, with impacts to 155 residences and 11 businesses.

2.4 PREFERRED ALTERNATIVE

This section is reserved for the Preferred Alternative.

2.5 OTHER GOVERNMENT AGENCY ACTIONS

Other significant actions proposed by government agencies in the same geographic area as the proposed project include the following projects.

Project	Work Description	Project Status
STH 26 through Johnson Creek	Expand to four lanes	Begin construction 2001
STH 26 – South of Watertown to Main Street	Reconstruct and expand to four lanes	Begin construction 2003
Hwy 12 – Cambridge to Ft. Atkinson	Reconstruct existing two-lane roadway	Begin construction 2003
Hwy 12 – Ft. Atkinson Bypass Including Hwy 12 East to Whitewater	Bypass corridor study	Begin study 2001
US Hwy 12 Whitewater Bypass	Construct new bypass around Whitewater	Begin construction 2002
STH 106 – Ft. Atkinson to CTH CI	Reconstruct existing two-lane roadway	Begin construction 2005
STH 16 – Watertown Bypass and East to East County Line	Resurface existing two-lane roadway	Begin construction 2001
STH 16 – Oconomowoc Bypass	Construct new bypass around Oconomowoc	Begin construction 2003
STH 60 – Columbus to STH 26	Reconstruct existing two-lane roadway	Begin construction 2004

2.6 UNRESOLVED ISSUES

During the course of the study local units of government have requested that WisDOT consider additional interchange access. These are:

- Interchange access on the south side of the City of Milton.
- Interchange access at CTH N southeast of Jefferson under Alternatives C3 and C4.
- Interchange access at CTH A southwest of Watertown under Alternative N1.

In addition, WisDOT is considering a potential relocation of the existing CTH Y intersection between Janesville and Milton under Alternatives S2 and S3.

These issues are unresolved at this time.